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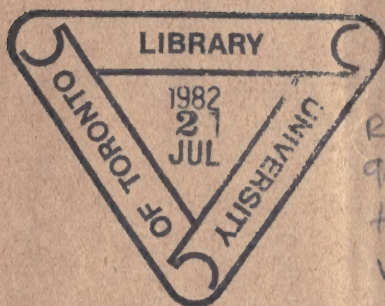
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RUNNING FOR BOYS.

A SHORT time ago, as will be remembered, a Mr. Farmer, who has been in his day a prominent footballer and athlete, created a good deal of stir by a letter to the Press in which he denounced the practice of permitting boys under nineteen years of age to take part in long-distance races—that is, of a mile or upwards. It will also be remembered that he backed up his views by producing the expression of a guarded but very similar view adopted by five highly eminent and well-known physicians and surgeons. A good deal of discussion ensued, but finally the matter dropped for the time being; it has, however, been revived by the publication of certain pronouncements by the Medical Officers of Schools Association. To these views great weight attaches. Of the special subject under consideration the members are better informed and better judges than specialists in consulting practice in London can possibly be, and the letter addressed by their president, Dr. C. E. Shelly, to the *Times* contains some common-sense remarks to which parents, schoolmasters, and the medical profession will do well to give attention.

These medical officers adopt the extreme position of neither side; that is, they advocate neither grandmotherly coddling nor the Spartan survival-of-the-fittest attitude of many athletic persons. They point out that neither age nor distance is in any way an exact criterion of the strain inflicted on any given boy by any given race. The quarter-mile, they very justly observe, is a far more exhausting race for most boys than are the long-distance races; and to this we would add the half-mile, in which school-boys have done at various times very notable performances, but, now and then, with considerable detriment to themselves. It would, in our opinion, be far wiser to prohibit these two distances for boys under eighteen than to interfere with "school runs" and paper-chases. In the latter any chance of a boy damaging himself is practically absent, for the pace set is so much slower than that of flat races that exhaustion, when it does occur, affects the muscles of the legs and thighs rather than of the heart. The Association lays it down that the plan of running all the boys, old and young, over the same distance in these runs, is not to be recom-

mended; but we are not sure that in this particular we quite agree. For if a separation is made it must be on some rough line, such as age; and that means that a compact, well-developed youth capable of any exertion may be sent into the junior division to set the smaller boys a hot pace over a short run, while an overgrown and much less precocious boy a month older may be put to compete with the most athletic of his fellows over the longer distance. When all the boys run together, the best runners may finish a five-mile cross-country run half an hour before the worst; but at the same time this gives those who, by reason of youth or retarded development, cannot excel at this exercise, a chance to complete the run and benefit by it without any undue strain.

Yet another point dealt with by the Association is of vast importance; that is, the relation of meals to active exercise. It is true, of course, that the digestion of the average boy rises superior to disturbing factors which would disorganise that of an adult; but the recommendation not to allow active exercise within an hour of a meal is one with which we agree most emphatically, and one which is disregarded probably at every public school in the kingdom. At regular intervals parents call attention publicly to the spare diet supplied at certain public schools; and we believe that there are many schools at which very serious deficiencies in this respect exist. But in one way a not too liberal midday meal may be no disadvantage; that is, when football or some other active exercise is indulged in immediately afterwards. The Medical Officers of Schools also do good service in pointing out that boxing, rowing, swimming, and long-distance diving are exercises which severely tax adolescents, and before beginning which they should be medically examined just as for running. Another very practical point made is that hockey is a more exhausting game than football. In this they are almost certainly right. Yet another precaution frequently omitted is the avoidance of severe exercise too soon after convalescence from infectious fevers and similar illnesses. Boys are usually so full of repressed energy at such times that they require supervision to prevent excess in this direction.

The situation, then, amounts to this: That the best medical authorities—for so we regard the Association of which Dr. Shelly is president—are agreed that, provided there is a thorough medical examination of every boy on entering school; provided that the effects of various games on the younger boys are carefully supervised; provided that certain common-sense rules, which boys themselves often do not appreciate, are enforced upon them, then the risk of ordinary school exercises, including cross-country runs and flat races not exceeding one mile,

is so reduced as to be quite negligible. Over-anxiety of parents about their children is only one of the manifestations of the increasing tendency of the day towards neurasthenic and introspective psychoses. At this time of the year large numbers of boys are turning their energies towards their annual school sports. If the masters and school medical officers do their duty in observing the limits laid down by the Association, parents may safely leave their boys to follow their own inclinations and their school traditions in these matters without fear of the consequences.

MEDICAL ADVERTISING.

SOME years ago a well-known London Club, which exists, if we are correctly informed, for the purpose of furthering the cause of judicious and legitimate advertising, invited a number of prominent members of the medical and legal professions to participate in a discussion on the desirability of eliminating the existing conventional clauses that regulate the conduct of members in these professions in regard to the advertisement columns. The symposium that resulted from this invitation proved most interesting, and it is a pity that no full shorthand note of the speeches is extant. There was, on the part of Club members—all of them “common-sense, practical, commercial-minded men”—a natural surprise and astonishment at the attitude which lawyers and doctors are compelled to adopt, and an equally natural scepticism as to the good results which spring from existing regulations. Nor, to a layman at least, could the defence of the anti-advertising professionals be regarded as adequate and fair. It is reasonable to suppose that members of the profession, many of whom are, after all, also “practical, common-sense, commercial-minded men”—and we use the last qualifying adjective in its highest and most commendable sense—are not indifferent to the arguments which were brought forward at that symposium, and that many a medical man has at times troubled his brain and vexed his conscience by secretly deploring the conventions that prevent frank advertisement. It is, perhaps, time that the subject should be reconsidered. It is at least time that some authoritative pronouncement should be made on what constitutes proper advertisement, and what not. We are quite aware that various bodies have laid upon themselves the task of posing as the mentors of their colleagues in this matter. An American association has formulated a lively ethical code to regulate the conduct of its members. Yet at the present moment there are members of the profession in the States whose names appear daily in half a column of print under headlines which, to a sober-minded Englishman, savour of the acme of fulsome appreciation. With us, also, ethical codes have been evolved. Yet none of them

appears to take cognisance of well-marked infringements of at least the spirit of these anti-advertising conventions. To mention merely one instance, the “Medical Directory” may be cited. In some impertinent quarters this useful compendium, which we willingly admit contains much interesting information, is regarded as the most absurd and injudicious kind of advertising, and when one compares it with the “Law List,” for example, it is clear that there are very many objectionable points about it. No similar production, so far as we are aware, exists in any other country. It is a volume that is filled by the claims of self-assertion. Medical directories cater for the public, whether openly so or discreetly, does not very much matter. And the layman, we can safely assert, cannot discriminate between the records. He must accept what he reads, and when he sees that Dr. This has only London behind his name, while Dr. That puts himself down as a student of no less than seven Continental universities of repute, it is not to be wondered that he classes the former as a dunce and the latter as a genius. Probably Dr. That has only visited these foreign centres for a couple of weeks at the most—in very few cases, indeed, is it a fact that he can truthfully claim to be a student of any one of them in the same sense that he is a student of his own hospital. But how is the layman to know this? Again, the fortunate writer of a paper flourishes his achievement above or under the limited lines of his colleague, who has never appeared in the pages of a professional journal. Here again the layman cannot discriminate, and accepts without question. There are, fortunately, members of the profession so conscientiously alive to the spirit of their professional conventions that they shun the very shadow of self-advertisement; and one reflects on them with relish when considering the disadvantages of conventional restraints. It is a relish only slightly tempered by dissatisfaction when it is remembered that the mass is not so scrupulously conscientious, and that advertisement, in some form or other, is a sign of modern specialism and scientific activity, and that it is gradually asserting itself in the ranks of the medical profession.

ANNOTATIONS.

Deaths from Poisoning.

SOME interesting returns have lately been published which embody the fatalities from the ingestion of poisons during 1907, carefully classified for purposes of comparison with previous years. Accidental deaths from scheduled poisons (those which may be retailed only by qualified chemists) numbered 142, and of these opium and its preparations caused as many as all other poisons put together. Among non-scheduled poisons ammonia and hydrochloric acid seem to do the most mischief, though their pre-eminence is not nearly so great as that of opium. With suicides, however, carbolic and oxalic acids of the scheduled poisons, and hydrochloric acid of the unscheduled, deprive opium of the chief place; but it is consolatory to learn that the addition of the first named to the schedule has been followed by a very great decline in the number of suicides effected by its aid. Hydrocyanic acid and potassium cyanide stand next to these in the favour of self-poisoners, well ahead of all other agents. Sheep-dip, vermin killer, and similar industrial poisons which the new Poisons and Pharmacy Act allows to be sold by dealers in horticultural and agricultural requisites caused remarkably few fatalities in 1907, either by accident or intent; it will be noted carefully whether any considerable increase of mortality from these poisons will attend the relaxation of these restrictions. Broadly speaking, the returns are satisfactory. Substantial declines are shown in respect of the total number of deaths from scheduled poisons, however administered; though the corresponding figures for unscheduled poisons remain about stationary. Poisonous vapours and anaesthetics show an increase, and the analysis of the cases due to the latter shows that out of 186 reported deaths, 95 were due to chloroform, seven to chloroform in mixtures with ether, ten to ether alone, two to ethyl chloride, and three to nitrous oxide gas: in 69 cases the drug used was not specified.

Alimentary versus Aerial Infection in Tuberculosis.

IN student days every medical man must have come across fellow workers who, so far from possessing conservative instincts, were usually full to the brim of some recent discovery or other, in the light of which they were ready to interpret and explain far more than ever the responsible authors had done—which, so strong is the parental pride and confidence of the human mind in its own ideas, is saying a good deal. To draw a distinction of Plato's, these comrades of our youth were imbued with philodoxy rather than with philosophy. They had a love, generous and whole hearted and well meaning, but still mischievous, of what was merely opinion. With great submission, it must be said that these reminiscences have been called forth by some passages in a speech by Sir James Crichton Browne, at a meeting convened to consider the formation of an association for prevention of consumption in Shropshire. Now, Sir James Crichton Browne has many admirable qualities as a medical publicist—scientific eminence,

power of effective speaking, organising and directing ability. These attributes he has devoted to the public weal times and again. It is certain, therefore, that responsible laymen, who, to their credit, are taking expert medical advice to heart more and more every year, will be thoroughly impressed when told that practically there are just two carriers of tubercle bacilli, to wit meat and milk. It is true that a passing reference was made to inhalation, but there is no doubt that what the lay mind would lay hold of exclusively was the old warning of "death in the pot." Now this is no time or place to pronounce upon the ætiology of pulmonary tuberculosis. But it may fairly be remarked that the seemingly crucial experiments advanced by disciples of Calmette and Von Behring can be matched with the like from those thinking as Flügge and Koch do, and that there is evidence from countries like New Guinea and Japan that tubercle prevails quite independently of food infection. More than this, there are the old classic observations connecting decline in tuberculosis with improved ventilation. And it is to be noted that at the recent American Congress, Professor Woodhead did not make any sweeping deductions from the work of the British Royal Commission. It is facts like these which practically-minded laymen with large agricultural interests are ascertaining and citing, and in face of them, unduly positive statements can only check the growing faith in modern scientific medicine.

The Action against St. Bartholomew's Hospital.

THE recent action in the King's Bench Division brought by a member of the medical profession against the Governors of St. Bartholomew's Hospital for damages for personal injuries suffered by him whilst undergoing an examination under anaesthetics on the operating-table of the hospital has aroused much interest in the profession and among the managers of hospitals. The issue involved was one of much importance, and had the verdict gone the other way the consequences might have been very serious indeed to those responsible for the administration of medical charities. The plaintiff, who had entered the hospital for gratuitous treatment and examination, said that by reason of the negligence of the defendants or their servants his left arm came into contact with the hot-water tins used for heating the operating-table at the time of his examination, and that as a consequence he was paralysed in that arm, while the right arm was also injured. Defendants denied liability and said that there was no negligence on their part. They said that it was an inevitable accident, and that the injuries suffered were incident to an examination of the character made, and that the relation of master and servant did not exist between them and those engaged in the examination, and that they were not, therefore, responsible in law. After hearing most of the evidence on behalf of the plaintiff, Mr. Justice Grantham held that there was no case to go to the jury. It would be a fatal policy to the good of the country, and the injury done would be untold if he allowed it to do so, and he accordingly gave judgment for the defendants, with costs.

MEDICAL OPINION AND MOVEMENT.

A CASE of Diabetic Gangrene affecting the breast is reported in the *Australasian Medical Gazette* by Dr. Swift, of Adelaide. The onset of the condition was very sudden, with agonising pain, and in the middle of the night. The pain was referred to the left nipple and was described as similar to that of a red-hot iron being bored into the skin. One and a half inches below and to the outer side of the nipple was a livid bluish spot, which in a few hours was gangrenous and covered with blebs. The temperature was 102.6° F. and the pulse rate 120. There was a very large quantity of sugar in the urine, and diacetic acid also; but no albumin was present. For some days the patient's condition was serious: vomiting was very troublesome, pain intense and subdued only by morphia, and fever up to 104°. Subsequently a new focus of gangrene appeared near the sternum, and the slough demarcated around the original patch measured six inches by four. Ultimately the two foci ran into one, which healed up satisfactorily, and simultaneously the sugar disappeared from the urine, which became normal also in quantity and in specific gravity. It is known that a severe fever, as, for example, enteric, affecting a diabetic patient will sometimes be accompanied by disappearance of sugar from the urine, and Dr. Swift suggests that the similar result in his case may be ascribed to the products of the growth of the micro-organisms in the sloughing masses of breast-tissue. He has searched the literature for a similar case, but is unable to find any record of one: certainly diabetic gangrene affecting an organ so near the heart and so well provided with blood-vessels must be extremely rare.

THE Treatment of Erysipelas by carbolic acid and alcohol is warmly advocated by Dr. Judd in the *Medical Record*. The entire affected surface is swabbed with a 95 per cent. solution of carbolic acid, and also some half an inch of the surrounding healthy skin. This is left on until the reddened colour of the inflamed area is replaced by the whitening due to the acid, and the latter is then swabbed off with pure alcohol until a pink colour is regained. If a large portion of skin is involved, it is advisable to do one section of it at a time; but the whole may be treated by successive applications at one sitting. The result of this system is immediate and complete cessation of the burning and itching sensations which distress patients so much. Within twenty-four hours the temperature sinks to normal, appetite returns, and swelling, if not quite lost, is at least much diminished. The whitening caused by the carbolic acid must not be allowed to go on to thorough blanching, otherwise a burn and subsequent slough will be produced. The extension to the neighbouring apparently sound skin is a highly important part of the treatment. It is said that no scarring results; the superficial layers of the skin merely come off as after mild sunburn, and the skin beneath is but slightly tender. Moist dressings soaked in saline solution or 1 in 2,000 perchloride of mercury solution are recommended as local after-treatment. Dr.

Judd has tried the method in 82 cases, and reports 5 failures, 10 delayed recoveries, and 67 complete successes: he is convinced that it is very valuable in all kinds of cases, mild and severe.

AT the New York Obstetrical Society early this year, Dr. Ralph Waldo narrated a case which led to a lengthy discussion of a point that deserves attention at the hands of medico-legal experts. Dr. Waldo was called in to attend a woman, three feet of whose large intestine had been pulled out through a Rupture in the Uterus produced by a physician who had undertaken to empty the latter for inevitable abortion. The actual injury to the uterine wall was caused by an ovum forceps. The gut was immediately recognised and pushed back, and the uterus packed with iodoform gauze. On opening the abdomen a rent was found in the uterus two inches long, and bleeding freely; this was stitched up. The large intestine was completely torn across at the junction of the rectum with the sigmoid flexure, and the mucous membrane of the latter and of much of the descending colon had been pulled out and was found prolapsed in the peritoneal cavity. There were also several holes in the peritoneal coat of the colon. The damaged gut was resected, and the ends anastomosed with Murphy's button. Owing, it is believed, to the thorough preparation of the patient for the curetting, whereby the large intestine was practically empty, the subsequent course was entirely favourable, and the patient left hospital in three weeks.

THIS remarkable case was followed by the narration of similar accidents within the experience of the various gynaecologists who contributed to the debate. In fact, there appeared to be hardly anyone who had not at some time or other perforated the uterus, and many confessed also to having pulled intestine out of it. This series of confessions recalled to one speaker an action for *mala praxis* brought in this country in 1876 against a country practitioner, to whom the same catastrophe happened. In that case the doctor cut off six feet of intestine and threw it away; and a very eminent gynaecologist of the day who was called for the defence swore that such an event might happen in his own practice, with the result that the practitioner was acquitted. Now, in regard to another such action, should one ever arise, it may be very important to show that several of the foremost gynaecologists in New York have actually pulled down intestines, through a perforated uterus, though none of them went so far as to cut off the loop. One speaker had perforated the uterus four times whilst curetting, though he had never pulled abdominal contents through the hole. The other important fact which emerges is that several of those present felt that the dilators used were responsible for the uterine ruptures. Apparently a Sims dilator, and a modification of it known by the name of Wylie, are popular instruments for this purpose in America, and to the blades of these the damage is

attributed. Possibly the use of Hégear's dilators explains the infrequency of these occurrences in Britain, if they really are infrequent, and not merely unreported.

OBSTETRIC opinion abroad as to the proper conduct of labour in various degrees of Pelvic Deformity seems to be by no means unanimous. Two papers by French obstetricians which have appeared lately emphasise these differences of practice. Pinard, in the *Bulletin Médicale*, sums up the teaching of the Baudelocque. He never induces labour, whatever the deformity, and also interdicts absolutely both forceps and version whenever the fœtus is alive. Cæsarean section, pubiotomy, and symphysiotomy are alone relied on for labour with contracted pelvis. The latter operation is never to be done until dilatation of the cervix is complete; and Cæsarean section is not undertaken until labour has set in. Labusquière, on the other hand, publishes in the *Annales de Gyn. et d'Obst.* the teachings of the Vienna school. Spontaneous delivery is waited for as long as possible. Version is done much more often than for forceps operations, and prophylactic podalic version is a recognised method of treatment, either with or without the induction of premature labour. The high forceps operation is considered permissible in selected cases. Premature labour is induced, preferably at the end of the ninth lunar month, for conjugates from 7 to 8.5 cm., when previous labours have shown the impossibility of spontaneous delivery. Again, in Bumm's clinic at Berlin premature labour is now never induced. When labour begins, unless the pelvic contraction is extreme Bumm waits until it seems certain that help will be necessary. He then, under anæsthesia, makes a complete examination and proceeds to the necessary measures. These include version for slight contraction; pubiotomy for conjugates of 7 to 9 cm., when dilatation is complete; extra peritoneal Cæsarean section for conjugates of 6 to 6½ cm., and the classical operation for smaller ones still. He allows forceps for multiparæ after pubiotomy. Markedly as Continental obstetric practice differs from that taught in Britain, it is evident that divergences in different clinics are as great as, or greater than, even those between British and foreign views.

DR. DAWBARN, Professor of Surgery in the New York Hospital, draws attention to a valuable sign in cases of Fractures of the Long Bones, which he terms "osteophonic percussion." The sign is elicited in the following way: In the case of the humerus, for instance, a stethoscope is applied over the greater tuberosity, and, at the same time, an assistant percusses the external condyle. In an ordinary fracture with the ends in apposition little difference is noted in intensity and pitch of note from that produced by the sound humerus on the other side, but if fascia, muscle, or other soft tissue is interposed between the broken ends, the sound conduction is distinctly lessened and the pitch of the note lowered. As the author points out it is of the utmost importance that such a condition be determined at the earliest possible moment, so that it can be rectified, if need be, by operation, instead of

first putting the limb up in splints, and discovering only after some weeks that the ends fail to unite owing to this interposition of soft tissue. He expresses surprise that this sign of osteophonic percussion has not found its way into any of the textbooks on surgery, as he has found it of the greatest assistance in a large number of cases. He points out that a thin piece of interposed muscle or fascia will render hopeless bony union, and yet one may still be able to get crepitus perfectly well and consequently be entirely misled as to the condition.

"COLOUR-BLINDNESS.—Can it be remedied?"
Such is the heading to an article by Dr. Brawley, of Salisbury, U.S., in the *International Journal of Surgery*. It is generally held that colour-blindness is due to an organic defect in the visual apparatus which is permanent and unalterable, and it is rather surprising to learn from this author that by diligent application and study the defect can apparently be completely overcome. He relates the case of a conductor on the Southern Railway whom on examination he found to be so colour-blind that he was unable to distinguish in the skein test green, blue, grey, brown, and different shades of red, and said they were all the same colour, differing only in shade. He was in consequence compelled to relinquish his post. He set to work, however, to study the colours and supplied himself with all the different colours of woollens and various samples of paint, and also provided himself with a miniature lantern. At the end of five weeks he was able to undergo the most rigid examination without a mistake, and later on he was also examined by the chief surgeon and two other oculists with the same result. Since then Dr. Brawley has encouraged several other colour-blind applicants to study to overcome their defect, and they have been able to do this in the same way. The author is, therefore, led to the conclusion that with practice the intelligent colour-blind can educate himself sufficiently to call ordinary colours correctly. Although he does this, it is probable that he does not see them as they really are or as others see them, but has, as it were, a standard of his own by which he makes the necessary distinctions.

DR. W. L. HARRIS, of Providence, U.S., advocates Mercurial Injections after the removal of Cancerous Growths as a means of treatment for secondary enlarged glands. With them he combines injections of a soluble iron salt and arsenic as tonics to counteract the tendency of the patient to anæmia and debility both from the disease and from the mercurial treatment. For the first two months after operation he injects every ten days 15 centigrams of salicylate of mercury, and then smaller doses every 20 days for the rest of the year. At the same time he injects .03 centigrams of a soluble iron salt and .0025 decimilligrams of arsenious acid at first every day and then at variable intervals. During the second year he continues these injections at longer intervals. This treatment appears to have given some excellent results in the hands of this author. In several cases, in which removal of affected glands was for one reason or another not undertaken at the time of

operation, the glands have completely disappeared in the course of the treatment, and no recurrence of any kind has taken place. Such are cases of breast cancer with axillary and clavicular glands affected but not removed at the time of operation, and a case of cancer of the floor of the mouth with glands in the neck. The glands in this case were left for a subsequent operation, but disappeared rapidly under treatment with injections. The patients must of course be watched for signs of mercurial saturation, and blood estimations should be made to control any tendency to anæmia that may result from the mercurial injections.

DR. TEDESCHI has drawn attention to a peculiar Scapular Bruit, which he has observed many times in the course of examination of the chest. In order to elicit the phenomenon the patient is requested to breathe deeply or to move the arms to and fro. If, at the same time, the palm of the hand is placed upon the scapular region a peculiar sensation is perceived intermediate between a thrill and a rub. If the ear is applied to the same part a bruit is heard of the nature of a crepitation. This crepitation is heard most distinctly sometimes at the internal border of the scapula and sometimes in the supra-spinous fossa. The patient frequently calls the attention of the physician to the part on account of pain experienced, which is increased by palpation of the muscles. The author considers that the phenomenon is of muscular origin, and is due to an inflammatory process localised in the muscles of the scapular girdle and in the aponeuroses. He is of opinion that tuberculosis and excessive use of the muscles of the shoulders are both ætiological factors in the condition. In the course of the last three years he has found the condition in 58 patients, and of them 49 presented signs of tuberculosis. On the other hand, a large proportion of these patients were engaged in some employment such as dressmaking with the use of the hand sewing-machine, tailoring, washing, and bread-making. The so-called "professional" factor appears to be the more plausible and probably the more direct causal factor, and it is easy to understand that in subjects debilitated by tuberculosis excessive use of any group of muscles might occasion a lesion of the nature described. It does not seem necessary, however, to assume that the lesion is directly connected with the pulmonary trouble in the sense of its being of a tubercular nature. In fact, the author admits that some of the patients were suffering from anæmia and general debility.

TWO cases of the rare condition known as Schlatter's Disease are reported by Dr. Bowser and Mr. Thomson respectively in the *Edinburgh Medical Journal*. Although not often reported it seems probable that the lesion is not so much rare as unfamiliar, and a knowledge of its existence and of the favourable prognosis associated with it would have saved the parents of Mr. Thomson's patient much unnecessary expense and anxiety. Schlatter's disease occurs chiefly in active boys about thirteen to fifteen years of age; it has also been described by Stimson under the name of

avulsion of the tubercle of the tibia. The symptoms are pain in the region of the insertion of the patellar tendon, tenderness in the same spot, and sometimes lameness and discomfort after sitting for any length of time with the knee flexed in the usual way. Skiagrams show a solution of continuity in the bony downward prolongation of the epiphysis which normally forms, as will be remembered, from but one centre of ossification for both the tubercle and the epiphyseal end of the bone. The gap between the tongue-like process and the epiphysis itself is probably filled with cartilage; and it is believed that the lesion is caused by the powerful action of the quadriceps femoris acting through the patellar tendon on a tubercle in which a separate centre of ossification has formed. The want of continuity is not evidence of fracture, which is a totally distinct condition. Sir James Paget thought that the lesion represents "one of the least degrees of periostitis due to strain." No treatment is required.

A RECENT number of *La Presse Médicale* contains an account of a new reaction obtained by applying Tuberculin to the Nasal Mucous Membrane. The authors propose to use their method—which they claim to be quite free from danger—in place of Calmette's ophthamo reaction. The technique of the method consists in placing a pledget of cotton-wool, soaked in a one-per-cent. Calmette solution, in contact with the mucous membrane of the lower part of the anterior nares for ten minutes. In from eighteen to forty-eight hours the mucous membrane becomes congested, and a local exudate can be seen, which rapidly dries up, leaving a thin yellowish crust behind. This crust falls spontaneously in about five days, the underlying mucous membrane being slightly congested. All the patients examined who were suffering from pulmonary tuberculosis gave a positive reaction, and out of seventy-three obviously tuberculous individuals sixty-eight positive reactions were obtained, and of the remaining five cases two showed congestion of the mucous membrane without exudation, the remaining three cases being lost sight of. The rhino-reaction would therefore seem to be as trustworthy as the ophthamo- and cuti-reactions; it can, moreover, be used without the patient's knowledge, and in addition it has so far been free from any disagreeable consequence to the patient.

LEHMANN, in the *Deutsche Milit. Zeit.*, describes a method of treating Ingrowing Toe-nails by local applications of perchloride of iron. It consists in painting the cutaneous overgrowth on its external and deep surfaces, as well as the ingrowing portion of the nail with a wooden stick, one end of which is wrapped round with cotton-wool soaked in a strong solution of perchloride of iron. These applications are repeated once daily, treatment as a rule being necessary for about a fortnight. The overgrowth quickly shrivels, hardens, and the nail softens. Pain is quickly abolished, and in mild cases the patient is able to get about as usual, providing he wears boots which are sufficiently roomy. In the more serious cases, when the part has become infected, a few days' rest are necessary.

HOSPITAL CLINICS.

THE SURGICAL TREATMENT OF TUBERCULOUS GLANDS.

By ARTHUR EDMUNDS, M.S., F.R.C.S., Surgeon to the Great Northern Central Hospital,
Surgeon to Out-Patients, Paddington Green Children's Hospital.

(Abstract of a lecture delivered at the Polyclinic.)

THE title of my lecture is perhaps rather anomalous, for it presupposes that the surgeon has the diagnosis ready made for him, which is very far from being the case in practice. One would often unhesitatingly advise excision of chronically inflamed or enlarged glands if one knew for certain that they were tuberculous; but this is just the difficulty.

A very usual sort of case to meet with is such as this. The patient is a child or adolescent who is brought to the surgeon because of the slow growth of some glands, most often behind and below the angle of the lower jaw. Interference with the general health has been so slight as to remain long unnoticed, or there may be a story that the patient has always been "delicate." Such a case is by no means diagnostic of a tuberculous affection of the glands, and, although various methods of diagnosis such as Calmette's and the tuberculin reactions have been introduced, it is safe to say they have not yet obtained general recognition; nor in these cases is it often necessary to employ them.

OPERATIVE OR NON-OPERATIVE TREATMENT.

The problem we have to consider then is how to treat a patient with slight ill-health and some lumps in the neck. I make it a rule in every such case to examine carefully the whole body: first, the other side of the neck, then the axillæ, groins, and the chest and abdomen. As a rule the man who examines the neck only, or but one side of it, often makes no serious mistake and goes unpunished; but occasionally one comes across an enlarged spleen, abdominal glands, or other conditions having an important bearing on the diagnosis. And I will mention one point more now. When I have completed an operation for cervical enlarged glands, I always examine the abdomen for enlarged glands carefully while the patient is still under the influence of the anæsthetic.

One more word of warning. One frequently sees allusion to the treatment of the single enlarged gland. I am almost inclined to doubt the existence of such a pathological condition, yet it is frequently described, and many people believe that it can be shelled out through a half-inch incision.

In considering which cases to submit to operation one has to look upon the enlargement not as a local foreign body, but as a manifestation of a pathological process. In the case of an acute infection of the tissues there is a fight to a finish between the glands and the micro-organisms. Here the contest is short and sharp. But in the case of tuberculosis we are dealing with a much more drawn-out struggle. The issue of the conflict is often doubtful for years, and in the end a large glandular area may be involved. It is possible to

fortify the resistance of the body by hygienic measures, and surgical interference must always be considered both in its effects on the parasite and the host. In acute infections such interference may be bad practice inasmuch as it interferes with the proper function of the lymphatic glands. In tuberculosis it may be good practice, for the glands have then fulfilled their functions as protective organs by isolating the invading parasite and confining them within the glands which can be safely sacrificed for the benefit of the rest of the body.

In coming to more practical details, I think it would be well to consider how to deal with a case such as the one we presupposed—a child or young adult with a few small glands which have caused no pain and have only slightly affected the general health.

On examination there are one or more lumps to be felt on one side of the neck; the other side of the neck is clear, the axillary glands are barely, if at all, palpable, and no others are to be found anywhere. In such a case one would be justified in advising an outdoor life in fresh air, and any other hygienic measures that seem suitable, together with the administration of the iodide of iron, which is, in my opinion, definitely the best drug for these patients. But before advising this we must think of the portal of infection. The tonsils, naso-pharynx, floor of the mouth, and teeth must be examined. There are undoubted cases in which adenoid vegetations are the seats of definite tuberculosis, and many more in which the tubercle bacillus has been found in them. Without attaching too much importance to the latter, for the ubiquitous bacillus can be found anywhere that dust can penetrate if a sufficiently careful search is made, there is no doubt that the tubercle bacillus can pass through a mucous membrane without causing any local manifestation of disease, and be deposited in some corner of a lymphatic gland draining that area. It is of little use, therefore, to send a child away without attending first to enlarged tonsils, adenoids, dental caries, etc.

Let us assume next that the glands do not subside, and that they are reasonably well supposed to be tuberculous. The question then becomes one not of whether, but of when, to operate. A great objection on the part of the patient and the friends to operation is the cosmetic one; but it is to be remembered that the practice of waiting for an abscess to form is absolutely certain to result in unsightly scarring, whereas by operating early one may get a neat unnoticeable linear scar.

TECHNIQUE OF THE OPERATION.

Having decided, then, to operate before the glands have broken down, the first problem that presents itself is that of the incision. We must

have one which will enable us to get access to the whole of the disease, which is always more extensive than the lump or lumps that can be felt. There are three main types of incision. One is a straight cut along the anterior border of the sternomastoid. This, I think, the worst possible; though it is very commonly employed, it does not follow the natural plane of cleavage of the skin, which runs more or less transversely. The second is an incision by which a large square flap is turned forwards: in some cases this is a great advantage, but as a rule in tuberculous cases it is unnecessary. The scar of the flap incision, extensive though it is, is very little noticed afterwards, but the centre part of it is still at right angles to the natural folds. The third and best type is an almost transverse incision, by which also there is much less liability to injure the fibres of the branches of the facial nerve. Moreover, the fibres of the platysma myoides are cut more directly across, which facilitates the subsequent suturing of this muscle.

After making this incision, one can retract the skin a little, and then divide the platysma. Next, deepen the incision until the sternomastoid is recognised. Seek for the anterior border of this muscle, and then deepen the wound down to the deep fascia. Make an incision deliberately into this, remembering that the jugular vein is beneath it. Having thus turned the flank of the glands by getting behind them it will now be possible to clear them out thoroughly. It may be of advantage to divide the mass in the middle, turning one half upwards and the other downwards. In tuberculous adenitis there is not the same objection to separating a chain of glands as in malignant disease. Besides these glands along the jugular—the concatenate chain—there may also be tuberculous glands in the posterior triangle of the neck.

Leaving for a time the lower mass of glands, and proceeding to deal with the dissection of the upper set, we come across the bugbear of this operation, the spinal accessory nerve, which passes in a fascial tunnel right through the midst of these glands to traverse the sternomastoid and gain the posterior triangle. Having discovered the nerve, usually between the mass of glands and the edge of the muscle, the roof of the fascial tunnel is slit up so as to enable one to lift it up and push up the glands from beneath it. One may then turn one's attention to the lower part of the wound, and strip down the glands by blunt dissection towards the root of the neck. If there is any difficulty with the lowest glands in the posterior triangle it is a good plan to make a second transverse incision over them.

As regards the suturing of the wound, the essential point is to avoid all tension. The ideal method is first of all to arrest all hæmorrhage—and if this is not possible to use a drainage tube—and to stitch the deep fascia and platysma with a few interrupted sutures. Then to go on to sew the skin edges together, for which many surgeons use Michel's clips; these are a most excellent appliance so long as the patient is not restive, but in those who will not keep still they often result in turning

in the edges. For this reason I prefer to use fine horsehair, passed through the edge of the skin only. On this I put a layer of gauze moistened in perchloride of mercury, then a large dressing of sterilised gauze and salicylic wool, using enough to keep the patient's head pretty firmly fixed. For the purpose of pressing the sides of the wound together the inclusion of a marine sponge—an article which, in my opinion, has fallen into quite undeserved disrepute—among the dressings is most valuable, especially when dealing with children, who are so often restless.

COMPLICATIONS DURING OPERATION.

There are several complications that may happen when carrying out this operation. In turning the mass of glands forward the lingual or facial veins may get torn, and there may then be most alarming hæmorrhage. There is, however, no need to be much disturbed when this happens; pack a sponge into the place from which the blood is oozing, continue the operation, and then tie the veins afterwards. If the jugular should be wounded it is better to take out one or two inches of the vein altogether rather than attempt to suture the rent itself. Branches of the facial nerve are very frequently divided, which leads to a drooping of the lip for a few weeks; but I have never seen it last permanently. To wound the spinal-accessory is not necessarily a disaster, though one should, of course, avoid doing so if possible. This is a nerve to be treated with respect; and you must, if you divide it, search for the ends and suture them together. The only other complication is wounding of the thoracic duct, but it is now established that this is not necessarily followed by serious results. There is no objection to ligaturing the thoracic duct if the wound in it cannot be closed. More often the accident is not discovered until a lymph fistula forms; it may then be advisable to reopen the wound and pack it thoroughly.

Let us now consider the gland which has gone on to softening and has thus formed a tuberculous abscess. To remove the glands and the abscess cavity *in toto* is the ideal treatment; but it is often very difficult to carry out, and it is generally better to treat it as a localised abscess; that is to say, to open and drain it, removing the main mass subsequently. In dealing with a very small abscess one may enclose an elliptical piece of the overlying skin by two incisions, and then get rid of the disease by incising the whole mass.

If the abscess bursts the best thing to do is to remove all the cheesy material, drain and dress with antiseptic dressing until it heals; this is often quite successful. Fistulous tracks are often left after an abscess has burst or been drained. These may be dealt with by first packing them with a small strip of gauze soaked in pure carbolic acid. Then an incision is made enclosing the skin surrounding the fistula, and two or three sutures are put through so as to cover in the opening. After again cleaning the skin, and with a new knife the surgeon then endeavours to dissect out the fistulous track entire and to get a clean wound which he can sew up and which will heal by first intention.

LATENT DISEASES.

EXTRACTS FROM A LECTURE BY THE LATE PROFESSOR POTAIN, M.D., OF PARIS.
(Specially reported for THE HOSPITAL.)

By latent diseases, we mean those diseases the existence of which is suspected neither by the patient nor by the physician, because their development being exceedingly insidious or because they assume the aspect of some quite different affection.

Recently a woman was admitted into the wards in a state of complete asystolism. She had been treated in 1894 for rheumatic endocarditis, and at that time I had noted the following symptoms: At first an obscuration, and finally the complete disappearance of the second sound and the appearance of a systolic souffle. The nature and the seat of these signs showed the existence of inflammation of the aortic and mitral valves. The lesions of the aortic orifice, however, were only transitory, and gradually the sounds became quite normal again; but the mitral souffle persisted, although much slighter than at first. The patient then left the hospital.

On the present occasion she showed all the signs of considerable cardiac hypertrophy, which was rather surprising since the mitral souffle was so slight that there could not be a lesion sufficient to account for the marked degree of hypertrophy; and, moreover, the latter generally arises at a very late period in mitral lesions, contrary to what happens in aortic trouble. The autopsy gave us the key to this unusual state of things, for we found extreme adherence of the pericardium. The adhesions were formed by thick fibrous tissue, which at certain points had become almost cartilaginous. The mitral valve was very irregular and presented numerous milky patches. The water test showed regurgitation, and there was at the same time a certain degree of stenosis owing to adhesion of the edges of the valves.

We thus see that in this patient the principal lesion, the one which had determined the cardiac hypertrophy, consisted in the pericardial adhesions, and these had developed in an absolutely quiescent way. It is very important for practitioners to know that latent diseases exist, and to learn, as far as it is possible to do so, how to detect them.

The first thing that strikes one when investigating this subject is the great importance of semiology. It is not sufficient to know that such and such an affection gives rise to such and such symptoms, but it is necessary to differentiate carefully which of these symptoms are common to other diseases.

Symptoms may be naturally divided into two classes; first, functional, and second, physical. Speaking generally, the functional symptoms are those which first attract the notice of the patient, and for which he comes to consult us. The physical symptoms are those which the physician alone is competent to detect and recognise, and he only looks for them when the nature of the functional symptoms indicate the probability of some morbid process existing.

Of course, it is not always possible to detect physical signs when dealing with diseases of deep seated and inaccessible organs, such as the brain

and spinal cord, for example, and in these cases functional symptoms are of prime importance. The latter, however, may themselves be absent, and it is easily understood how certain affections may run their course, even to the very end, in an insidious and quiescent manner, without giving rise to any symptoms, subjective or objective.

Latent diseases may be divided into three classes: (1) Latent diseases proper, namely, those which give rise to no symptoms whatever; (2) masked diseases; (3) dissimulated diseases.

In the first class we have certain cases of cerebral tumours, of cancer of the kidney, of pericardial adhesions, of gastric ulcer, of renal calculi. In the Museum of the Faculty of Montpellier there is preserved a man's brain with a knife blade embedded in it, without there having been any cerebral symptoms before the man's death. It is not at all rare to find, at the autopsy of elderly people, calculi in the kidneys which had not given rise to any symptoms during life. I remember a case of large encysted calculus of the kidney filling the whole of the pelvis of the organ without there having been the slightest symptom of its presence. These cases are explained by the greatly diminished sensibility of the tissues in elderly people. Generalised miliary tuberculosis of the lung may run its whole course without betraying its existence. Adherent pericardium or adherent pleura may, for a very long time, remain latent, and this is also true in certain cases of chronic atrophic nephritis.

Many affections, the anatomical substratum of which consists in atrophy or stricture of an organ, only become apparent when the patient puts more work than usual on that particular organ. I have called this state of diminished functional power "miopragia" (Gr. *μείον* diminution). Gibert, of Havre, has noted that children suffering from stenosis of the bowel keep well as long as they take only milk, but as soon as solid food is given trouble arises. Mitral stenosis gives rise to a state of circulatory miopragia, which only becomes manifest when the patient, doing more work than usual, increases the flow of blood through the heart.

As an example of "masked diseases" I might give chronic diarrhoea of malarial origin. I have come across quite a number of cases of most persistent diarrhoea which only disappeared on the administration of quinine. Malaria may assume other masks. A man suddenly becomes comatose, and the case is diagnosed as apoplexy; as, however, there is a past history of malaria, quinine is injected subcutaneously, and the man recovers rapidly.

The marked preponderance of a single symptom frequently gives rise to error in diagnosis. I have often had occasion to quote the following case: One of my surgical colleagues was for a long time considered to be suffering from some serious cerebral trouble; he was subject to attacks of vertigo of such intensity that, when going round the wards, he often had to clutch hold of the bedrails to save himself from falling. Careful auscultation showed that

it was a case of aortic regurgitation, and that the symptom "vertigo" had overshadowed all others.

The third class of latent diseases, *i.e.* simulated and dissimulated affections, is the largest of the three, and contains a great number of very different affections. I shall not do more than mention that class of diseases which are simulated or hidden by patients either for no apparent reason (hysteria) or for some advantage to be gained (malingerer). Much more interesting are the diseases which are masked by the co-existence of some other affection, or by the presence of some complication. Pulmonary emphysema, which frequently accompanies phthisis, may mask the physical signs of the latter. The diagnosis of aortic regurgitation becomes very difficult when there is at the same time mitral stenosis. The existence of gastric affections is often ignored by patients. A medical man of my acquaintance who suffered from cardiac symptoms got entirely rid of these by a simple lavage of the stomach. It was the latter which gave rise to the heart symptoms, and yet digestion seemed to take place quite normally and the patient had not noted any gastric symptoms whatever.

It is not at all exceptional for a gastric affection to give rise to all the symptoms of heart disease: palpitations, dilatation of the right ventricle and auricle, congested liver, ascites, œdema; etc., and all these may disappear when appropriate treatment is given for the stomach trouble. If diseases of the stomach can influence the organs of circulation, on the other hand cardiac affections may give rise to gastric trouble, and the latter may be so marked as to overshadow all other symptoms. I have come across cases of persistent diarrhoea which have resisted all ordinary treatment, and auscultation has shown the presence of some circulatory affection. I saw a case of this sort with Dr. Guyot; the patient complained only of chronic diarrhoea. On examination I found an aneurysm of the abdominal aorta. Cardiac affections may simulate disease of the liver when congestion of this organ, ascites and œdema, predominate in the clinical tableau; they may also, particularly mitral lesions, cause marked nervous symptoms leading to errors of diagnosis.

In affections of the stomach one may observe vertigo, violent cephalalgia, and sometimes apoplectic attacks. I remember the case of a patient presenting the latter symptom which was simply due to the absence of teeth and imperfect mastication of food. Gastric cough, if it happens to coincide with a certain degree of emaciation, may cause suspicion of early phthisis. Certain pseudo-asthmatic attacks, due either to bronchial spasm or vascular spasm or even to urticaria of the bronchial tubes, have a gastric origin.

Intestinal parasites may give rise to a variety of symptoms. In the adult, *tænia* may produce *vesania*, kleptomania, etc. As soon as the parasite is expelled the mental symptoms disappear. As an example I might quote the following case. A naval officer, noted for his reckless daring and courage, became all of a sudden timorous, irresolute, and incapable of giving the most trivial order without experiencing a feeling of extreme nervousness. The ship's doctor, very much astonished at this

marked change in the man's character, examined him carefully and found that he had a tapeworm. The latter was easily got rid of, and immediately the officer became his former self again. Intestinal affections may have a repercussion on the heart. I have seen entero-colitis give rise to symptoms of heart disease. Hepatic affections may have a more or less marked influence on the nervous system; hypochondria, for instance, may be produced. They may also cause heart or lung symptoms. I have seen a case of hydatid cyst of the postero-superior part of the liver in a young man give rise to a dry cough and progressive emaciation; incipient phthisis was feared.

Gall-stones may simulate cancer of the pylorus. A patient was considered to be suffering from cancer of the stomach and an operation had been arranged for. Having seen her, I made the diagnosis of cholecystitis due to calculi. The patient died before operation, and the post-mortem showed the presence of a calculus which had determined inflammation of the gall-bladder and peritonitis. I saw another case with Gueneau de Mussy. We had found a tumour in a patient with a cancerous heredity, and, as a matter of fact, she actually did die of cancer, but at a much later period. At the time we examined her she had no cancer, and the proof is that, having sent her to a Spa, she returned quite well and brought a whole bottleful of gall-stones which she had passed. Different lesions in a given organ may cause identical symptoms, and the diagnosis is often a very delicate matter. Nothing is more difficult to distinguish than *anæmia* and congestion of the brain, and Audral and Gasset describe the symptoms as identical. The mechanism differs, but the result is the same; in the first case there is not enough blood in the vessels and in the second there is too much.

Cerebral hæmorrhage and softening of the brain can only be distinguished when the circumstances are taken into account. If the patient has been suffering from chronic nephritis, one is more inclined to favour the diagnosis of hæmorrhage; if his arteries are atheromatous, softening is more probable. In the lungs it is often difficult to distinguish cancer from tubercle.

Confusion in the diagnosis of lesions in quite different organs may also exist, when they give rise to similar symptoms. Congestion of the lung may produce syncope and apoplexy, just as congestion of the brain does. It frequently happens for elderly persons to be struck down with apoplexy, and at the autopsy to find pneumonic consolidation. The same thing may happen when large pulmonary embolisms suddenly obstruct circulation.

Incipient phthisis sometimes gives rise to palpitations which may cause one to suspect heart disease. At a more advanced stage the same error may be caused by a certain degree of induration of the lung, producing increased præcordial dulness, which one takes to be due to hypertrophy of the heart. Difficulty of breathing and œdema of the lower extremities, due to lung affections, may also be referred to the heart. Dulness, due to sclerosis of the apex of the lung, may cause one to think of an aortic lesion.

If I seem to have developed my subject more than is necessary, and if I have given many cases as examples, it is only to show how necessary it is to examine patients most carefully and minutely.

In conclusion I may say that if functional sym-

ptoms often cause errors of diagnosis, physical signs, although of greater importance and value, are themselves subject to caution and require to be carefully studied before drawing any inferences from them.

MEDICINE.

SKODAÏC RESONANCE IN LOBAR PNEUMONIA.

SINCE Skoda first drew attention to the fact that the percussion note over the upper part of the front of the chest may be tympanitic or higher pitched than that of the other or healthy side when there is a pleuritic effusion or empyema at the base, so-called "Skodaïc resonance" has been well enough known as one of the physical signs of pleural effusion. It is, perhaps, less generally known that Skodaïc resonance precisely similar to that found in connection with effusions may also occur in certain cases of lobar pneumonia where there is no effusion at all. The occurrence of Skodaïc resonance over the upper lobe in front, in a case of lobar pneumonia, is no proof of there being effusion in addition to pneumonia. The following is an illustrative case:—

A young soldier, aged 22, was admitted to hospital, on December 12, for an illness that had begun three days previously with a rigor and acute pain in the left side of his chest. His other symptoms were dyspnoea, short irritating cough, thirst, loss of appetite, and a feeling of being so ill that he must stay in bed. There is little need to give the details of his illness beyond saying that he had the typical pyrexia, pulse and respiration rates of lobar pneumonia, and also typical rusty sputum. It is with the physical signs that we propose to deal here. On December 12 there was nothing abnormal to be made out in the right lung; over the left, at the very base posteriorly, there were impairment of percussion note and deficiency of breath sounds, with faint bronchial breathing and bronchophony, but no crepitations. Tactile vocal fremitus seemed, if anything, to be diminished at the left base. As regards the upper part of the left lung, both behind and in front, the physical signs seemed normal. On December 13 these physical signs were precisely similar, except that fine crepitations were occasionally to be made out in the area at the left base where there was bronchial breathing. The diagnosis of lobar pneumonia was made definitely. On December 14 and 15 the signs were similar but more extensive. Bronchial breathing could be heard over the whole of the left lung posteriorly, whilst in front the left lung was resonant, and the compensatory type of vesicular murmur was to be heard in it. On December 16 the patient was considerably more ill, expectoration was abundant and characteristic. All over the back of the left lung there was bronchial breathing, with here and there a patch of crepitant râles: it was quite dull to percussion from apex to base. Similar signs extended into the left axilla, but in front there was increased resonance from clavicle to nipple, with less marked bronchial breathing here than behind. The right lung still gave perfectly

natural physical signs. By December 18 the resonance over the upper part of the left lung in front had increased to such a degree that it was absolutely tympanitic below the clavicle. The percussion sound was as well marked a Skodaïc note as one ever hears in a case of pleuritic effusion. There was bronchial breathing to be heard over every part of the left lung except over the region of Skodaïc resonance, and it was thought that the upper part of the left upper lobe still contained vesicular air, whilst all the rest was in a state of hepatisation. The Skodaïc note, as well marked as ever, persisted until the patient's death on December 21. The only change that occurred in the physical signs between December 18 and 21 was the development of crepitations and bronchial breathing over the back of the right lung on December 20.

At the post-mortem examination the heart, pericardium, stomach, and abdominal organs were all healthy; the only obvious lesions were in the lungs and pleurae. There was no pleuritic effusion, but the whole of the left lung was in a state of grey hepatisation from apex to base, without a single portion being left capable of floating in water; the right lower lobe had become recently hepatised posteriorly, and there was acute pleurisy with yellow exudate over the hepatised regions.

The patient, therefore, came to hospital for a lobar pneumonia of the left side, which extended from apex to base. During the last few days of his life there was a very marked tympanitic or Skodaïc note over the upper part of the left upper lobe in front, which seemed to indicate that the left upper lobe was not completely consolidated. The patient died whilst the physical signs were still the same, and the autopsy showed that the left lung was hepatised throughout; and that this condition had existed for several days was indicated by the fact that the colour of the hepatisation was grey.

Those who have written about Skodaïc resonance in lobar pneumonia without effusion have usually assumed that the physical sign is due either to a partial pneumothorax, or to the upper lobe not being consolidated at the same time as the lower. Such explanations will not account for the case described, however. It is clear that Skodaïc resonance can occur in lobar pneumonia without effusion, even when the entire lung has been rendered airless by hepatisation. This is an important point to realise in the interpretation of the physical signs in any given case. The most likely explanation of the tympanitic note in the subclavicular region would seem to be that percussion evokes the resonance of the big bronchi and the termination of the trachea, so that it corresponds with the tracheal sound which

Dr. Williams drew attention to in normal children as being sometimes present on either side of the sternum, particularly the left.

This raises the question of what is the state of the lung in cases of pleuritic effusion in which Skodaic resonance near the apex is well marked. It would seem that, rather than meaning that the upper lobe still contains air, it may signify a considerably greater degree of compression by the effusion. Dr. Laveran more than once observed that in cases of pleuritic effusion, where during life the phenomenon of

Skodaic resonance was particularly well marked, post-mortem examination showed that the lung on the affected side was in contact with the anterior chest wall, but absolutely airless throughout owing to compression. It seems, therefore, that in some of these cases also the tympanitic or Skodaic note in the sub-clavicular region may be due, not to air in the upper lobe, but to indirect percussion of the trachea and large bronchi, the consolidated pulmonary parenchyma then playing the part of a pleximeter between the big bronchi and the chest wall.

JAUNDICE WITHOUT BILE PIGMENTS IN THE URINE.

A PECULIAR form of jaundice, characterised by yellow colouration of the integuments without any obvious elimination of bile pigments in the urine, notwithstanding the presence in the blood of pigment that gives Gmelin's reaction, was first described by Hayem in 1897. If it were not that the blood gives the nitric-acid test for bile pigments it might be thought that the yellow colour of these patients is due to something different to bile pigments—in short, that there is only apparent and not real jaundice. Be this as it may, the fact remains that patients come under observation from time to time, apparently mildly jaundiced in the ordinary way, and yet without demonstrable bile pigments in the urine.

The general characters of all Hayem's cases have been very similar. It has been a question of subicterus rather than of deep jaundice. The colouration of the integuments is usually a little different to the ordinary yellow, recalling rather that which has sometimes been termed xanthochromasia. In at least one case, however, the skin colour was indistinguishable from that of mild jaundice, and there was no particular restriction of the colour as regards its distribution. The urine not only does not give the ordinary tests for bile pigments, but it may actually be precisely the colour of healthy urine.

In one of Hayem's cases there was a little urobilin, but this is found in other conditions besides jaundice.

The yellow colouration develops slowly and insidiously. Once established it persists, though it may appear to wax and wane. It is a chronic persistent "jaundice," mild in degree, sometimes more marked, sometimes less, yet always without bile pigments in the urine. Sometimes the liver is just palpable, smooth even, not hard and not painful nor tender to pressure. There is usually nothing to indicate gall-bladder trouble. The spleen is not enlarged. The fæces retain their normal colour.

Men seem to be affected more commonly than women. Whether alcoholism has anything to do with it is difficult to say. Most of the patients are dyspeptic, and they often present symptoms of actual gastritis. They are also apt to be of nervous temperament, with predominance of neurasthenic phenomena such as inaptitude at work, ready fatigue, tendencies to gloominess, irritability, and loss of weight. In view of the dyspeptic symptoms, it seems not unlikely that the icteric tint is due to secondary infection of the biliary passages from duodenitis, which so often accompanies gastritis, and the pancreatic ducts may possibly be affected in the same way.

POTASSIUM IODIDE AND CITRATES IN PNEUMONIA.

THE pneumococcus is an organism which exhibits remarkable variability in its virulence in different seasons; hardly a death from pneumonia occurs in some years, whilst fatalities are distressingly numerous in others. Whatever drug happens to have been widely used in the treatment of pneumonia cases in a favourable year is apt to receive too much credit for the cures; when it is tried in similar cases in the bad years it proves to be no better than many of the other remedies that have been tried. It is next to impossible, therefore, to say precisely what value is to be attached to any particular line of drug treatment in pneumonia. Probably if nursing is efficient, if pain is relieved, thirst assuaged, and sleep encouraged and ensured, nearly, if not quite, as large a percentage of recoveries will be obtained when no special remedies are given as when this or that particular drug is used in the belief that it does specific good in these cases. Nevertheless there are many who advo-

cate one particular line of treatment or another with firm belief; amongst such methods is that by iodide of potassium and the citrates of potassium and ammonium, originated, we believe, by Dr. Ewart. An initial dose of calomel having been given, the following mixture is employed:—

R.	Potassii iodidi	...	...	...	gr. iv.
	Potassii citratis	...	...	...	gr. x.
	Liquoris ammonii citratis	...	...	...	ʒss.
	Excip. ad	...	...	...	ʒj.

Some authorities lay stress on giving this very frequently to start with, say every hour for the first six hours, then every two hours till next day, and thereafter four hourly until after the crisis. Others give the mixture four hourly from the commencement. Others, again, believe in giving a still larger dose of the ammonium citrate, even when administering it hourly. If one is not already wedded to a favourite prescription, the above seems well worthy of trial.

SURGERY.

THE OPERATIVE TREATMENT OF CARCINOMA MAMMÆ.

THE so-called complete operation for carcinoma mammæ, and by this we mean the complete removal of the breast with the pectoral muscles and the axillary lymphatic glands, first advocated by Halstead, has now been employed for a sufficient length of time to enable us to compare the results obtained by its means with those resulting from less radical measures. The history of the surgical treatment of carcinoma mammæ is interesting. It is not so very long since surgeons regarded suppuration in the wound as tending to reduce the liability to recurrence, and they used to fill the wound with dried peas with this object, the argument being that a tremendous reaction was produced which was sufficient to kill any portion of cancer that was left behind. Then the pendulum swung to the opposite extreme with the introduction of antiseptic methods, and primary union of the wound was then sought for with equal avidity. In the desire for this incisions were made which did not skirt the growth sufficiently widely so as to avoid tension when the wound was sewn up. Infected tissue was very often left behind, and recurrence was common, so common, in fact, that many surgeons regarded the operation as unjustifiable.

This led to the proposal to remove the axillary glands in all cases of carcinoma, a question which produced much controversy: the argument of the older school being that the glands acted as a filter which would at any rate prevent the general dissemination of the disease, and that it was therefore an unjustifiable proceeding unless the glands were felt to be definitely enlarged and involved. But there was a complete answer to this which has been amply supported by subsequent experience, that even for an expert surgeon it is not possible to say by palpation whether the glands are involved or not. In fact, one may go further and say that even if they are removed it is often impossible to give a definite opinion on the macroscopical appearances alone; a gland which is hardly, if at all, enlarged being often found histologically to be extensively infected. And even if they are not involved at the time of the first operation, they will subsequently become so, and a second operation will be necessary.

Eventually those who advocated removal of the axillary glands won the day, but it was left for Halstead to point out that to be consistent all possible sources of lymphatic infection should be removed, and that the most important of these is the lymphatic system in the fascia covering the pectoral muscle, and that the best way of getting rid of it is to remove the whole muscle. Thus was evolved the complete operation for carcinoma mammæ.

An incision is made from a point external to the tip of the coracoid process. From this point it descends and then divides, skirting the growth widely, and the two incisions meet again below the breast. The skin flaps so formed are dissected up thoroughly. The pectoralis major and minor are then freed from their thoracic attachments, and the

breast, together with the muscles, is dissected up. The muscles are cut transversely near their insertion, and this gives a good exposure of the axillary tissues, particularly the axillary artery and vein. The latter is an important point, because when the surgeon knows exactly where these structures lie he can remove the glands with greater freedom. The axilla should then be dissected out, and removed in one piece with the breast without cutting across any lymphatic vessels if possible. Infection of the wound with cancer cells is thus avoided. The raw area so exposed is a large one, and it is therefore well before sewing up to put in a drainage tube through a separate opening in the posterior skin flap. The wound is then sewn up.

There are one or two small practical points in the operation and in the after treatment. The upper end of the incision should not be made too far out, otherwise when the wound heals the upper part of the scar will be in the axilla itself, and this may impede movements of the arm. When the operation was first performed it was the custom to bind the patient's arm to the side during convalescence. It was then found that great disability resulted from stiffness and adhesions. To overcome this the arm was kept at right angles to the trunk after the operation until the wound was healed. But a still better way is to leave it entirely free, so that the patient may use it herself from the beginning. If this is done, surprisingly little loss of function results considering the extent of the operation.

This is the best surgical treatment for carcinoma mammæ as far as we know to-day; but it is not applicable to all cases. Some, unfortunately, are allowed to progress to such a degree that the radical operation is neither possible nor justifiable. In such cases, if any operation is done at all, it must be a palliative one—i.e. it is performed to relieve the patient of the local effects of a fungating mass, and not with any hope of effecting a cure.

The principal points which render the complete operation unjustifiable are (1) fixation of the growth through the pectoral muscles to the thoracic wall; (2) metastatic deposits in the viscera or bony system, and (3) advanced cachexia. But in most cases it is justifiable to do a palliative operation—i.e. to remove the growth locally by an elliptical incision; for if it is not already fungating, it will do so sooner or later, and the possession of such a mass will render the patient's life a misery. If however, the skin is so extensively involved that great tension will be necessary to bring the edges of skin together, or if it is likely that a raw area will be left it is better to avoid operating altogether. For if an infected area of thoracic wall is left exposed in the wound it grows with astonishing rapidity, so that in a few weeks there is a sprouting mass almost as big as the original tumour.

In order, therefore, to get the best possible result with carcinoma of the breast it is essential to operate early as soon as the diagnosis has been made, and to operate radically.

ANÆSTHETICS.

PRACTICAL HINTS FOR OPERATIONS ON THE EAR.

For short aural operations, such as incision of the membrane, nitrous oxide is in the majority of cases a good anæsthetic on account of absence of after-effects and freedom from danger. It should, of course, not be used when contra-indicated by such conditions as respiratory or circulatory disorder. Generally it proves fairly convenient for the surgeon, although when complete stillness of the patient is necessary it is not always entirely satisfactory. There is apt to be trouble from movement of the head, which interferes with the concentration of light on the very limited area of operation and with the delicacy of the surgeon's touch. The operator should, before administration is begun, place the head in the desired position, and it should be firmly held there by an assistant, not by the anæsthetist, who cannot properly attend to this and to his own duties as well, especially when a prolongation of the anæsthesia is needed.

For operations in the mastoid region, unless the patient is feeble, it is better to give chloroform, or a mixture containing it, than ether, provided, of course, that the administrator is fully competent.

The bone and overlying tissues are often very vascular, and bleed so freely if ether be given that the surgeon's difficulties are considerably increased. A large piece of gauze should be arranged with a view to preventing the operator's fingers or instruments accidentally touching the face-piece. The anæsthetist should be at the side opposite the surgeon, with the assistant standing between them.

During the latter part of the operation the anæsthetist should be on the look-out for twitching of the facial muscles, and should at once tell the surgeon if it occurs. This must be distinguished from grimaces due to insufficient depth of anæsthesia.

Usually only a light anæsthesia is needed whilst bone is being removed, but it is well to deepen it on approach of the final stage of the operation, when more sensitive structures (skin and subcutaneous tissues) are being cut or stitched, otherwise sudden movement may occur. If morphine have been given beforehand, or if the patient be inclined to coma, extreme caution is required. Only enough anæsthetic should be given to prevent movement, and the respiration should be very carefully watched.

DERMATOLOGY.

SHEEP'S THYROID GLAND IN THE CURE OF SCLERODERMIA.

SCLERODERMIA is fortunately a disease that one comes across only now and then, but it is so chronic that the same patient is likely to come under the care of many different medical men at different times. Hence most practitioners have the distressing condition to treat at some time or another. The disease in most cases is slowly progressive, with periods of quiescence. Resolution of the cutaneous and subcutaneous sclerosis is decidedly rare. The following case, therefore, in which a practically complete cure resulted from the administration of sheep's thyroid gland by the mouth cannot but be of interest.

The case was exhibited by M. P. Menetrier before the Société Médicale des Hôpitaux de Paris both in February and in June 1905. In February the scleroderma was typical and extensive, particularly upon the trunk, neck, and upper limbs, with great limitation in the movements of the latter. Thyroid treatment had already been started at that time, and it was persisted with until June, when the patient was again presented before a meeting of the Society. Fresh sheep's thyroid glands were mashed up in warm soup, a dose of 2 grammes (about half a drachm) being given daily for a week at a time, with interruption of the treatment for alternative periods also of a week. The dosage was always well borne, the only notable symptom having been acceleration of the pulse-rate during the periods when thyroid gland was being taken.

The scleroderma slowly but progressively lessened. There was no relapse, and not even any

cessation in the slow but steady improvement. By June the patient appeared to be cured. There was no longer any tendency to the local erythema after getting warm from muscular effort. The skin where it had formerly been sclerodermic had recovered its softness and suppleness; the arms and neck could be moved about with ease; the patient could walk without fatigue, and there had been an increase of several pounds in the body weight.

Spontaneous resolution of scleroderma is so rare that the thyroid gland treatment in the above case was in all probability an essential factor in the cure. At any rate, it would seem to be well worth trying in future cases of a similar kind.

BOOKS RECEIVED.

LONGMANS, GREEN AND Co.

"The Break-up of the Poor Law." Part I. Edited by Sidney and Beatrice Webb.

JOHN MURRAY.

"The Frontiersman's Pocket-book." Compiled and edited by Roger Pocock.

"The Interpretation of Radium." By Frederic Soddy, M.A.

JAMES MACLEHOSE AND SONS, GLASGOW.

"Manual of Diseases of the Ear." By Thomas Barr, M.D., and J. Stoddart Barr, M.B.Ch.B.

J. AND A. CHURCHILL.

"Chavasse's Advice to a Wife." Fifteenth edition. Revised by G. Drummond Robinson, M.D., B.S., F.R.C.P.

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"The Over-production of Women." By Mrs. Erskine.

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GYNÆCOLOGY.

APPARENT AMENORRHOEA.

CASES in which menstruation occurs in a normal manner, but the menstrual fluid is unable to escape externally owing to closure of some part of the genital canal, are not of common occurrence. When, now-ever, they do occur they are of great clinical interest from the point of view of treatment, especially when the lesion is congenital absence of the vagina, partial or complete. The great majority of the recorded cases are of congenital origin, most commonly due to an imperforate condition of the hymen; but absence of the whole or part of the vagina is fairly frequent, and closure of the cervix uteri has been described. The latter two lesions may be acquired, but it would seem that an imperforate hymen is always congenital. Closure of the vagina may occur as a result of a chronic granular vaginitis in infancy, the result of infection sometimes caused by the exanthems; scarlet fever is said to be the commonest source. It is, however, quite conceivable that infection from without other than that due to exanthems may cause a severe vaginitis with the formation of granulation tissue in the vagina and consequent complete fusion of the anterior and posterior vaginal walls. Acquired closure of the cervix is a very rare condition, but is said to have followed injury during labour, or cicatrization after operations, such as amputation of the cervix. More commonly, however, trauma, whether accidental or intentional, leads only to stenosis of the cervical canal, not to complete closure. So also lacerations of the vagina lead to the formation of a mere fistulous track more commonly than complete closure. The suggestion that the constant flow of uterine secretions from above assists to prevent complete closure probably has much truth in it.

The clinical history of these cases is generally very clear, because the patients usually complain of the well-known menstrual molimina, which show that the function is established, and yet no secretion escapes. As a general rule advice is sought before the patient reaches the age of 20 in the congenital cases or those acquired during infancy. When the hymen is imperforate the condition is self-evident on inspection of the vulva, and combined recto-abdominal examination reveals the presence of a fluctuating swelling between the rectum and the bladder, with the uterus movable on its upper end.

There is one point, however, of great clinical importance which it is advisable to settle before treating the case, and that is to ascertain whether the uterus and the Fallopian tubes have also become distended with the menstrual secretions. The distension of the uterus along with the vagina is not of so much importance, but if a single or double hæmato-salpinx can be demonstrated it is absolutely essential that these should be dealt with before letting the retained fluid out of the vagina and uterus. The danger of overlooking such conditions is that a possible rupture of the tube or peritoneal leakage of its contents may occur whilst emptying the vagina. Cases are on record in which peritonitis has occurred from this

accident. If a laparotomy is performed upon these cases the tubes may be emptied and their fimbriated extremities opened before emptying the vagina by a vulval incision. There would seem to be no adequate reason for removal of such dilated tubes unless it can be shown that they are hopelessly disorganised.

It is important clinically to adopt stringent antiseptics in opening a hæmato-colpos distended with menstrual fluid, for it must be remembered that any cavity which has never been exposed to the air is readily infected. It is also important to make no attempt to wash out the retained secretion, but simply to allow it to escape slowly into an aseptic dressing after putting in a large drainage tube to keep the incision open.

The treatment of absence of the vagina is a much more difficult matter, and the remarks concerning hæmato-salpinx apply to it also. There are two alternatives open: either completely to remove the distended uterus and, if affected, the Fallopian tubes by laparotomy, leaving the congenital vaginal absence alone; or to make an attempt to fashion a new vagina and drain the uterus through it after incising what appears to be its lower segment. The former alternative must be abhorrent, for it condemns the patient to a celibate life and much consequent mental suffering; on the other hand it is a difficult matter to make a vagina; but if the lower third or half only is absent it is well worth trying.

It is quite hopeless simply to dissect up between the rectum and bladder and to attempt to keep this track open by plugging. It always contracts into a mere fistulous track which is as useless as no vaginal canal at all. The only possible way of making a new vagina is to dissect up until the uterus is reached if the vagina is completely absent, or until the vagina is reached in partial atresia; and then after stopping all hæmorrhage to line the new canal with skin. It may be possible if only a short length of the canal is absent to draw down the vagina and attach it to the vulval incision, but this will be rarely feasible. As a general rule it will be necessary to form a skin lining either by taking flaps from the labia, or even the buttocks, and turning them up into the new canal; or else to make large skin grafts after Thiersch's method, and fix them securely in place by a few sutures. It will be rarely possible to get a good result from one operation, but if a skin flap or graft of any size can be got to remain in position its edges will grow and a second operation will then become the more hopeful. Great patience and ingenuity is required in performing any operation of this kind and the patient's confidence must be obtained. It is probably a good principle not to open the uterus to let out its contents until the new vagina is made. Very few operations of this nature have been performed, but the importance of the condition in an otherwise healthy individual makes it a matter of very serious consideration, before removal of the essential organs is carried out and the attempt to make a new vagina is abandoned.

DISEASES OF CHILDREN.

THE TREATMENT OF WHOOPING-COUGH—I.

It is decidedly disappointing that there has been so little improvement in the methods of treating whooping-cough, in spite of the enormous strides in the science of bacteriology, in serum therapeutics, vaccines, and the preparation of synthetic drugs. The recent discussion on the subject at the Royal Society of Medicine shows that the number of remedies is multiple, but the value assigned thereto by different authorities small.

The treatment ought to be based on the pathogeny and the morbid anatomy; but here again we tread upon uncertain ground. A general hyperæmia and congestion of the whole of the respiratory tract, from the posterior nares to the bifurcation of the trachea, is present. The posterior wall of the pharynx between the vocal cords and the under surface of the epiglottis are the most affected. During a paroxysm a small pellet of mucus may be seen on the posterior wall of the larynx at the level of the glottis, and removal of this stops the paroxysm (Von Herff, 1887). Irritation of this part causes a coughing fit, whereas other parts can be touched with impunity. Examination with a spatula may cause reflex irritation of the larynx and a paroxysmal cough; so, too, a crumb going the wrong way.

These observations suggest that the whooping depends on local conditions. Possibly it is influenced by the effect of the specific toxin on the nervous system, for other forms of laryngo-tracheitis do not set up the characteristic cough unless the child has previously had whooping-cough. The actual paroxysm can be stopped at the onset by dashing cold water in the child's face. This must be the result of a sudden inhibition due to shock. It can also be stopped by making the child vomit, as by inserting the finger into the throat. Here the result is almost certainly due to the act of vomiting enabling the child to get rid of the viscid, tenacious, irritating pellet of mucus. Naegeli recommended that the lower jaw should be pulled downwards and forwards. Sobel found this method successful in 87 out of 96 cases between the ages of three months and eight years, and that it is more successful in the older children. It must not be used when there is food in the mouth or œsophagus. It may overcome the expiratory spasm and asphyxia in cases without whooping.

The general treatment must be directed to the maintenance of the general health, the prevention of inanition due to severe vomiting, the guarding against pulmonary complications, the reduction in the frequency and the intensity of the paroxysms, and the shortening of the duration of the disease. The supply of fresh, pure, mild air must be as liberal as possible, though dependent on climatic conditions. The child should be kept in bed if there is much debility or a raised temperature. Two rooms should be available and used alternately. The temperature should be kept at 55° F. to 60° F., and 5° higher in infancy or if there are complications. There is no necessity for confinement to bed or to

the house if the weather is warm and dry and the disease is uncomplicated. Under such circumstances open-air treatment throughout is the best plan. Dust and draughts must be avoided. The diet must consist of soft, light, easily digestible food which does not irritate the pharynx and is not liable to set up flatulent distension of the stomach. If there is much vomiting, small frequent meals should be given after the paroxysms. It may even be advisable to induce vomiting before feeding. The state of the stomach and intestines must be attended to. An occasional dose of grey powder or rhubarb and soda is decidedly beneficial. The bowels should be kept freely open.

An abdominal belt, worn day and night, is comforting, prevents vomiting, and reduces the paroxysms. It should be made of linen or flannel, four to eight inches wide, three inches less in length than the girth at the navel, with an insertion on each side of two inches of elastic webbing or stockinette, and lacing up the back. It must be applied moderately tightly over the binder and under the vest, avoiding any compression of the thorax. It is often advisable to remove adenoids if they are present, especially if they interfere in the very least with respiration. The naso-pharynx should be kept disinfected with some mild disinfectant or douched morning and evening with Dobell's solution.

Serum has been prepared by Leuriaux and by Manicatide. The former inoculated horses with broth cultures of his bacillus, and claims good results from injections of five cubic centimetres. Several observers have noted that vaccination has a beneficial effect on the severity and duration of the disease.

On the assumption that the affection is due to local inflammation of the nose, pharynx, or larynx, various local applications have been vaunted as beneficial. Certainly it is advisable to keep the nose and throat as clean as possible, as a prophylactic measure against secondary infections. They may be sprayed with lotions of common salt, bicarbonate of soda, boric acid, or hydrogen peroxide in glycerin and water. As a specific the nose may be irrigated with a 2.5 per cent. warm solution of carbolic acid.

For insufflation or as an ointment for insertion into each of the nostrils one may use bismuth salicylate 5 parts, benzoin 5 parts, quinine sulphate 1 part; or boric acid 10, menthol 5, vaseline 30 parts. Insufflation of powders into the larynx is injurious and likely to induce spasms. The fauces may be painted once daily with a solution of one in a thousand corrosive sublimate as an antiseptic, or with a 5 per cent. solution of cocaine to stop vomiting and spasm; or a 2.5 per cent. solution of resorcin may be applied with a fine sponge to the epiglottis every four hours. Obviously many of the above applications are only suitable for older children. The further measures of treatment by inhalations, counter-irritants, and internal medication will be considered in another article.

THE ROYAL ARMY MEDICAL CORPS SECTION.

THE TERRITORIAL REGIMENTAL SURGEON AND SANITARY INSTRUCTION.

IN addition to training the regimental stretcher-bearers in a knowledge of first-aid, it is incumbent on the Territorial regimental surgeon to give instruction in military sanitation and prevention of disease to the sanitary sections, and possibly also to the water duty men of his unit. Further, it is expected of him that he should by means of demonstrations, or in any other way that seems to him advisable, strive to awaken in the combatant officers, and in all other ranks of the regiment an interest in, and knowledge of military hygiene, so as to enlist their willing co-operation in his efforts to maintain their health and consequent efficiency. In each of these directions the regimental surgeon may do good work.

As already mentioned in a previous article, the sanitary section of a regiment consists of a sergeant and eight men. They may be taken from the regimental pioneers, or they may be furnished by the various companies of the unit. From whichever source obtained care should be taken in their selection, as their duties are of a special kind, and men of good common sense and some strength of character are needed. In carrying out their training the scope and nature of the instruction should be adapted to their standard of intelligence and education, and be calculated to arouse in them interest in their work. To be successful it should be a combination of lectures and practical demonstrations.

The course of lectures given should, following the Manual of Sanitation, include the following special subjects:—

1. The importance of sanitation to an army.
2. The causes of disease.
3. The diseases of the soldier in the field.
4. The prevention of disease.
5. The sanitation of camps.
6. Sanitation on active service, on field days, and during manœuvres.

Under all these headings there is ample material for interesting and instructive lectures. Our campaigns in the past furnish plenty of object lessons of the enormous losses that may occur from what are really preventable diseases by disregard of the laws of sanitation. On the other hand it can be made quite clear and certain that modern advances in the science of sanitation and our wider knowledge of the causes of disease enable us to deal successfully with the special dangers to which an army in the field is exposed. Nowhere is that better demonstrated than in connection with enteric fever and dysentery, which have always been the most fatal diseases in past campaigns. We now know that they can be entirely kept in control by proper and perfect disposal of excreta, and by ensuring a supply of pure food and water. It is by bringing home these facts to the members of the sanitary sections that they will be brought to realise the important part they play in war.

It is, however, necessary that instruction such as that outlined above should be supplemented by some practical work. Sanitary sections should have

opportunities given them of making instructional latrines, of building refuse destructors, and of constructing the different kinds of grease pits. Facilities for such practical work might be furnished by having a march out of the regiment into the country for the purpose of planning a regimental camp. This would allow of the selection and preparation, under the regimental surgeon and quartermaster, of sites for kitchens, ablution places, and latrines, while refuse destructors might be built and grease pits constructed. The importance, too, of a pure water supply might be demonstrated by placing one or more men over it, and thus controlling its use. After carrying through the above work everything should be replaced and put in order, thus furnishing the very necessary object-lesson that every camp should be properly cleaned before troops march out of it. The experience gained by such an afternoon's work would be invaluable, not only to the sanitary sections but to all ranks of the battalion, and regimental surgeons should urge it on the commanding officers of their units. Should, however, such a field day as suggested not be obtainable, another plan would be to arrange for a practical demonstration of the above details through the divisional school of instruction, by making application to the administrative medical officer of the division. In connection with the training of these sanitary sections, it should be remembered by the regimental surgeon that if he happens to be in a large town where his battalion forms part of a brigade, the medical officers of the regiments in that brigade may combine to hold one special class at which all the sanitary sections will attend. Under this arrangement they will carry on the class conjointly, each one taking up a special subject. They are also allowed to arrange for lectures by outside specialists, if thought advisable.

Although the present idea is that the training of the water-duty men should be carried out by the divisional school of instruction, this may not be the case, and it may fall upon the regimental surgeon. The conduct of such a class should be in accordance with the official memorandum that has been issued for the guidance of officers and others instructing men of the Territorial force in water section duties. The memorandum is so full and detailed that no comments on it are necessary. The five lectures that it embodies, embrace full instruction on water-borne diseases, on the sources and prevention of water pollution, on the purification of impure water and on the practical working of the new filter cart, a full description of which was given in *THE HOSPITAL*, for November 28th, 1908. As has been already insisted on in previous articles, no matter what the class to be instructed, successful results can only be obtained from it if the interest of the regimental combatant officers can be obtained in its working. If they can be got to understand that water sterilisation, the disposal of excreta, the personal hygiene of the men, and everything connected with the sanitation of the unit are not the

sole work of the regimental surgeon, but should be equally shared by them, then the object aimed at will be attained. Let all ranks realise that they have not only to combat the human enemy opposed to them, but also the more deadly, because unseen microbes of disease, and they will listen to the instruction given them, and by their hearty co-opera-

tion ensure freedom from disease and increased fighting efficiency. In his work of tuition the regimental surgeon will obtain valuable assistance from the official "Manual of Sanitation," from Elkington's "Notes on Military Sanitation," from Caldwell's "Prevention of Disease in Armies in the Field," and "Military Hygiene," by R. H. Firth.

MENTAL DISEASES.

WHERE A CERTIFIED CASE MAY BE TREATED.

WHEN certified an insane person becomes either a pauper patient or a private patient. In Section 341 of the Lunacy Act of 1890, the definition of a pauper is given as "a person wholly or partly chargeable to a union, county or borough"; and of a private patient as "a patient who is not a pauper." By Section 18 of the same Act a justice may not sign an order for the reception into an institution of a person as a pauper lunatic unless he is satisfied that the alleged pauper is either in receipt of relief, or in such circumstances as to require relief for his proper care: it being added that, for the purposes of this section, a person is to be deemed to be in receipt of relief who is visited by a medical officer of the union at the expense of the union. A certified private patient may at any time be transferred to the pauper class, should he fall under the definition of that class, and similarly a pauper patient may be transferred to the private class, should the required weekly payments be forthcoming.

For a person to be certified as a private patient, a petition from a relative or friend, with a statement of particulars attached, two medical certificates, and a reception order signed by a judicial authority are required. For a pauper patient no petition is required and generally only one medical certificate. The judicial authority to sign the order must be a judge of county courts, a stipendary magistrate, or a justice of the peace specially appointed under the Lunacy Act of 1890. (A list of the justices specially appointed under the Act can be seen by applying to the police, the clerk of the peace, or the clerk to the justices). The steps to be taken for the certification and removal of a patient will depend on which class (private or pauper) he belongs to and where it is proposed to send him to.

A certified patient may be looked after at home or be sent for care and treatment either (1) to single care, or (2) to an institution. By "single care" is meant residence with someone who only looks after the one patient. Any person may take in one certified case to reside with them "for profit" provided that certain relations set forth in the Act do not exist between the patient and themselves—the conditions as to reports, visiting, etc., also set forth in the Act have of course to be fulfilled. More than one case may not be taken by any person without the special consent of the Commissioners in Lunacy.

Institutions to which the certified insane may be sent are of three kinds—namely (1) licensed houses (or private asylums), (2) registered hospitals, and (3) county and borough asylums. These correspond more or less with the three kinds of institutions in

which cases of physical illness may be treated, that is, (a) private hospitals or nursing homes, (b) general hospitals, and (c) poor-law infirmaries. Licensed houses are private asylums, licensed by the authorities under the Lunacy Act for the reception of a specified number of patients. They are the private business of those to whom the license is granted, and the fees charged are fixed by the license holders. No accounts are published, but they are, of course, strictly under the control of the Commissioners in Lunacy as regards the treatment of patients. A list of these licensed houses is to be found in the annual report of the Lunacy Commission, together with the names of the licensees and medical superintendent, and the number of patients of each sex for which the license is granted. The fees charged at any of them may be ascertained by application to the resident medical superintendent.

The registered hospitals for those afflicted with mental diseases differ from most of the general hospitals for physical diseases, in that payment towards maintenance is taken from the friends of any patient who can afford it. They are institutions, "not being asylums," registered under the Lunacy Act by the Commissioners "wherein lunatics are received and supported wholly or partly by voluntary contributions, or by any charitable bequest or gift, or by applying the excess of payments of some patients for or towards the support, provision, or benefit of other patients." They are managed by committees of subscribers, and are obliged by the Act to publish annually a full statement of accounts in the form prescribed by the Commissioners. In most of them certain kinds of cases are ineligible—e.g., epileptics, paupers, etc., and only acute recoverable cases are taken free or at low fees. The fees paid in any case are arranged between the committee and friends of the patient. A list of the registered hospitals will be found in the annual report of the Commission, and application for admission of patients should be made to the Secretary or medical superintendent.

Neither licensed houses nor registered hospitals are under any obligation to take in any particular case of mental disorder; nor, unless some definite agreement has been previously made, to keep the patient for any definite length of time after admission. Thus, unless arrangements are made beforehand, it is useless taking the patient, even if properly certified, to the institution, as admission can be refused: and if, after admission, the case is found to be ineligible, the friends can be called upon to remove it.

PUBLIC HEALTH AND HYGIENE.

PROVIDENT AND CHARITABLE MEDICAL ASSISTANCE OR STATE MEDICINE.

At a recent meeting of the Council of the Poor-law Medical Officers' Association there was a unanimous agreement on several points of interest dealt with by the Royal Commission on the Poor Laws. These may be summarised as follows:—

1. The value of the past services of Poor-law medical officers and the recognition of the disadvantages under which they have laboured and the inadequacy of their remuneration.

2. The undesirability of organising medical assistance on a provident basis.

3. Disapprobation of the proposal to draft the State poor on to provident medical institutions.

4. Condemnation of the proposal to make every medical practitioner a Poor-law medical officer, or, as the Minority Report puts it, the supersession of the outdoor medical service of the Poor Law "by a publicly subsidised system of letting the poor choose their own doctor." And

5. Disapproval of the proposal to allow a poor person to claim State medical relief without the intervention of the relieving officer or assistance officer.

The Poor-law Medical Officers' Association must rejoice with other sections of the profession in the divergent reports in which the inquiries of the Royal Commission on the Poor Laws have culminated. Had the Commission been unanimous on the question of medical assistance and their unanimity taken the line of the Majority Report the interests of the medical profession would have been as directly threatened as the permanent solution of the problem of medical assistance of the poor would have been retarded.

The Council of the Poor-law Medical Officers' Association hold, and we think our readers will agree with them, that it would be futile and dangerous to attempt to reorganise Poor-law medical relief upon a provident basis.

We think that in the existing order of things the provident dispensary has its place, a great and important place, in the provision of medical attendance for the class unable to pay medical fees, but it is chimerical to suppose that provident institutions can be extended so as to embrace the large and unfortunate class with which the now discredited and certainly inadequate machinery of the Poor Law has hitherto dealt. A provident basis of organisation for a class which by nature, tradition, and the exigencies of its lot is essentially improvident, on the face of it is not promising. It is clear that whatever such organisation may be in name it will, in fact, rest upon quite other than a provident basis. Either it will be sustained by charity or by the State, or it will not be sustained at all. It is very important that the medical profession should face the situation quite frankly. Will the charitable contributions of the well-to-do compensate for the poverty and improvidence of the poorest classes in the community in the matter of providing medical relief? We have

no hesitation in saying that they will not. The medical profession is groaning under the evils of the system of charitable provision at the present time; its burden will be unbearable should the system be extended so as to cover the whole ground of medical care and attention not directly paid for by the immediate recipients.

Not only will medical men be expected normally to contribute in services altogether disproportionately to their means, but when the resources of charity are inadequate, as on not infrequent occasions they will be, the claims of suffering humanity will continue to be met by the unfailing compassion of a profession which will not harden its heart at the importunate dictates of mere self-interest. The primal fact to be recognised is the catholicity of medicine. The one passport to its services should be the claim that they are needed. A fractured leg is to be set because the bone is broken and not because the patient can pay for treatment or has been provident enough to insure payment, or because the appeals of the injury to the charitable have brought it within the pale of provided relief. And the public conscience can only properly be satisfied when it has been made a public charge to secure medical care whenever and wherever it may be needed and irrespective of the virtues or vices or status or resources of the recipients. As is clearly stated in the Minority Report, this does not necessarily involve the gratuitous provision of medical treatment to all applicants. But it does mean that the chargeability relating to the treatment of disease is a public responsibility and not a private concern of the medical practitioner who is trained to practise medicine and not charity or provident organisation. We are equally in agreement with the Poor-law Medical Officers' Association in their opposition to a publicly subsidised system of letting the poor choose their own doctor. As stated in the Minority Report, any such system would lead to an extravagant expenditure of public funds unchecked by official supervision and with no security for the due observance of hygienic requirements and of the conditions on which restoration to a healthy life is possible. A unified medical service will alone meet the circumstances of the case, and in such a unification of the public civil medical services lies the solution of the problem of dealing with medical attendance on the indigent and improvident, without injury to public or professional interests. We only differ from the Poor-law Medical Officers' Association in their desire to retain the relieving officer in his present position. We repeat that it is irrational to place any bar upon the rendering of medical services where they are needed. Where the aid of medicine is required let it be sought untrammelled; but by the public organisation of chargeability let monetary interests be safeguarded by officials who are not medical men and who will not stand between medical men and their patients, but will see that services which have been properly

rendered under State provisions are paid for as the equity of the circumstances demands. In other words, if we are to have relieving or assistance officers their function will not be such as their name implies, but the safeguarding of the public interest of charge-

ability. It is obvious that medicine will lose nothing, while the public gain will be great if there is provided a unified civil medical service available for all, but safeguarded from abuse. The recovery of such charges is a public, not a medical concern.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

THE UNTRUTHFULNESS OF PATIENTS.

In one of his inimitable sermons, the eloquent Father Fuller is at some pains to discuss the varieties of untruthfulness. The enumeration of these shades and degrees of lying are in a way as amusing and as practically interesting as Touchstone's list of the species of insults in the giving of the lie. There be those that lie because they will not, those that lie because they cannot, and those that lie because they may not speak truly, and with each and all of these varieties the practitioner has made acquaintance to his great distress of mind, and no less great disturbance of temper. We all know of the untruthfulness of patients, and at some period or other we have all of us had cause to regret that (to quote our Elizabethan preacher once more) men hold not dearer the verisimilitude of fact to the despising of its counterfeits and shame.

In hospital days there loomed the black-listed "chronic" whose wearying catalogue of symptoms would have served the average novelist for a copy of the popular brain fever, or the patient who gorges forbidden fruit on visiting day and denies the overwhelming evidence of his own excreta. In private practice the list can be greatly extended, and every practitioner will be able to furnish examples of instances in which the lie direct, the lie prevaricate, or the lie by intention on the part of his patient has made him stumble, and some in which it has even produced the cousin german to disaster. The full significance of the importance of telling the truth, the student only learns to appreciate when he is alone, fighting his first case as a "locum" or assistant. In private practice, rightly or wrongly, one has to depend to a much greater extent than in hospital practice on what the patient says. As students we are told, by men who have for the most part never been in private general practice, that the statements made by a patient should be disregarded until verified by an accurate examination. As solitary workers in our daily round we learn that hospital methods of minutely examining each case are absolutely out of the question. No private practitioner can afford to waste half an hour or more in making blood counts, or as much time in searching for gonococci. Nor is it possible in private practice to carry out in its entirety the strict personal examination such as the patient in a hospital ward is subjected to. The practitioner has to accept what the patient tells him and to guard himself against error by an intuitive perception of perversions and against loss of temper by remembering that many patients love to indulge in morbid exaggeration.

To a large extent patients lie because they cannot speak the truth. The other two classes may be

easily disposed of. Those that will not are usually exposed with facility, and the very small section of those that may not present no great difficulty, at least to the general practitioner. But there is a very large class of patients who cannot speak the truth. Their bent is towards exaggeration, the suppression of fact and the suggestion of the fanciful. They are an interesting class, and in a way we should be grateful for their existence, for they present us with a constant reminder of the fact that imagination is not yet extinct in these isles. The hysteric stands at the head of the list, and we have long since condoned his lying, just as we have condoned the kleptomaniac's thieving, and the epileptic's murdering. Second-class untruthfulness, to abide by Fuller's classification, in the majority of cases is not so much an immorality as a lesion. Many of our patients cannot speak the truth; either through lack of courage or through excess of self-love, they must lie, exaggerate, suppress, and dissemble. It is useless to appeal to their better feelings; to tell them that they are placing their health in jeopardy by treating their medical attendant like a man whose eyes have to be dust-dimmed. They are incapable of recognising these facts, and they will continue to stick to their versions till the end of the chapter, even though their untruthfulness may be made "transparent to the world and trebly exposed." With this degree of lying the general practitioner finds it hard at times to keep patience, and yet he gains nothing by cursing it. His policy is to accept it and to learn to spot it when he meets with it just as readily as he detects a simple lesion. The obvious cheat, the man who comes to try a fall between experience and deceit, will be easily unmasked. He bears his blushing traces too fairly to deceive any but the tyro. But the man who cannot speak the truth is not so readily recognised, except when he lies painfully and with a stammer—and few patients slur their vowels when they hide their past by discussing their present. The danger is always that we may be tempted to treat such as deliberate perverters, forgetting that there is a psychological basis for their behaviour, and that the lie of the truthfully incapable is a pathological lesion.

We are becoming more tolerant of psychological lesions, and the general practitioners should be in the van in educating the public to bear with them. In his pioneering propaganda he will be able to work with a more honest heart and more determined spirit if he recollects that he, too, is daily bearing in patience the many trials entailed by the untruthfulness of patients.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

LONDON'S AMBULANCE SERVICE.

THE report of the Departmental Committee appointed by the Home Secretary to inquire into the ambulance service in the metropolis, of which Sir Kenelm Edward Digby, K.C. (chairman), Lord Stamford, and Sir William Collins, M.P., were members, has issued its report. The scope of the inquiry was limited to "cases of accident and sudden illness occurring in streets and public places within the metropolis," but the Committee have taken evidence as to the means of conveyance to hospitals or elsewhere of persons lying in their homes or other private places, in urgent need of medical or surgical treatment.

The Committee arrive at the following conclusions:—

We think that it has been abundantly shown that the present system is gravely defective, and results in much preventable detriment and suffering by reason of the transport by unsuitable means of persons who have been injured or taken ill in the streets or other public places, and that the real evil arises from the great use which is made of ordinary vehicles such as cabs and vans even in serious cases which require the transport of the patient by the best means possible. We do not regard the wheeled litter as an ideal means of transport for "street cases," but it is highly serviceable and, apart from the question of speed in cases of the greatest urgency, fairly meets the requirements for safe, if not altogether comfortable, transport in most classes of cases. We regard a well-constructed and properly fitted rapid ambulance (horsed or motor) as a superior means of transport to the wheeled litter, and we should welcome, if practicable, the complete supersession of all other modes of conveyance by the rapid ambulance. Having regard, however, to considerations of expense, direct and indirect, we . . . consider that the wheeled litter service should be retained, subject to any improvements of the type of litter that may be possible, and, if necessary, additions to their number, and that the existing means of transport of "street cases" should be supplemented by the introduction and organisation of a sufficient number of rapid ambulances to deal with the more serious cases. We think that the introduction of rapid ambulances must in the first instance be tentative and experimental, but should be organised on lines which would enable the system to be extended so as to be capable of dealing with urgent cases other than "street cases."

The recommendations of the Committee, if adopted, will entail new legislation. They recommend:—

1. That the Metropolitan Asylums Board should be empowered by Act of Parliament to establish and maintain a non-infectious service of rapid ambulances available for dealing with the conveyance of persons suffering from accident or sudden illness occurring in streets or public places within the metropolis.

2. That for this purpose, and especially with the view to a complete separation of the non-infectious service of ambulances from the ambulances used for the conveyance of infectious cases, the Local Government Board should be empowered to frame regulations.

3. That the Metropolitan Asylums Board should, subject

to such regulations, if any, as aforesaid, be empowered to enter into agreements with the Commissioner of Police, subject to the approval of the Secretary of State for the Home Department and Local Government Board, in respect of the following matters:—

- (1) The number, position, size, and equipment of any new ambulance stations for the purpose of dealing with "street cases."

- (2) The staff required for the service of the ambulances for the purpose aforesaid.

- (3) The provision of the requisite signalling apparatus, and generally with reference to any matter necessary or incidental to the effective service of the ambulances.

- (4) The use of the non-infectious ambulances of the Metropolitan Asylums Board for cases of accident or sudden illness occurring in the streets or public places within the Metropolitan Police District, but outside the County of London, on such terms as may be agreed on, including (if so agreed) a reasonable payment to the Metropolitan Asylums Board out of the Metropolitan Police Fund for the use of the ambulances for the purposes aforesaid and for any expenses connected therewith.

4. That the necessary powers should be given to acquire compulsorily any sites for stations or signalling apparatus required for the purpose of the ambulance service.

5. That the cost of and incidental to the provision and maintenance of the stations and their equipment, except in reference to any police officers who may be employed in or about such ambulance service, and except so far as regards the adjustment for those portions of the Metropolitan Police District which are outside the County of London, be borne by the Metropolitan Asylums Board, and no payment in respect of the use of the said ambulances shall be required from or on behalf of any person suffering from accident or sudden illness occurring in streets or public places.

6. That the Guardians of the Poor of any Union within the Metropolitan Police District be empowered, with the consent of the Local Government Board, to enter into an agreement with the Commissioner of Police, subject to approval as aforesaid, for the use of any rapid ambulance belonging to such Guardians for the conveyance of persons suffering from accident or sudden illness in streets or public places on such terms as may be agreed on, including, if so agreed, a reasonable payment from the Metropolitan Police Fund for the use of the ambulance.

Sir William Collins signs the report, subject to numerous reservations which he has embodied in a memorandum. We are generally in agreement with these reservations. We believe that they have a very momentous bearing upon the public issue, and that the fact that Sir William Collins was in a minority on the Committee is due to a want of apprehension and full knowledge of the needs and circumstances of the metropolis and of its local government, of which Sir William Collins is a master. We therefore hope that any legislation may follow the lines laid down by Sir William Collins rather than those embodied in the report of this Committee.

The whole subject is of the first importance. The report and memorandum are far too long to publish in full, and we advise our readers, especially all Londoners and members of Parliament, to study both carefully and in detail.

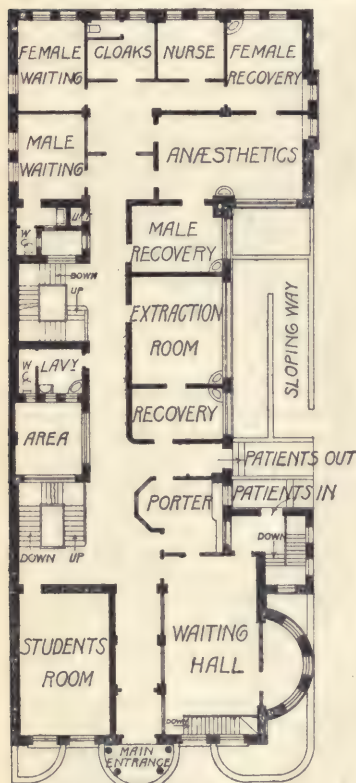
THE DENTAL HOSPITAL OF MANCHESTER.

THIS hospital was founded in 1884 with the double purpose of establishing a much needed charity and of founding a fully-equipped school for the training of dental surgeons. For the latter purpose it is associated with the University of Manchester, and also with the Royal Infirmary; and affords the necessary training for students preparing for the L.D.S. and B.D.S. qualifications of the University, the examinations for which are held in Manchester; also for the L.D.S. qualification of the Royal College of Surgeons of England, and of other licensing

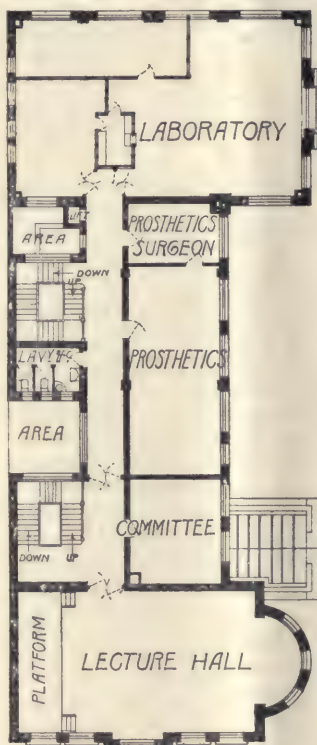
waiting and recovery-rooms, for male and female patients, lavatories for each sex, and a room for the nurse. Two staircases, and a common room for students complete the accommodation on this floor. Cloak-rooms, bicycle-rooms, and lavatories for students are provided in the basement—and a sloping way in the front area affords access to the bicycle-room.

On the first floor is the department of prosthetics, a somewhat awkward Greek term, under which is included the mechanical work which forms so important a part

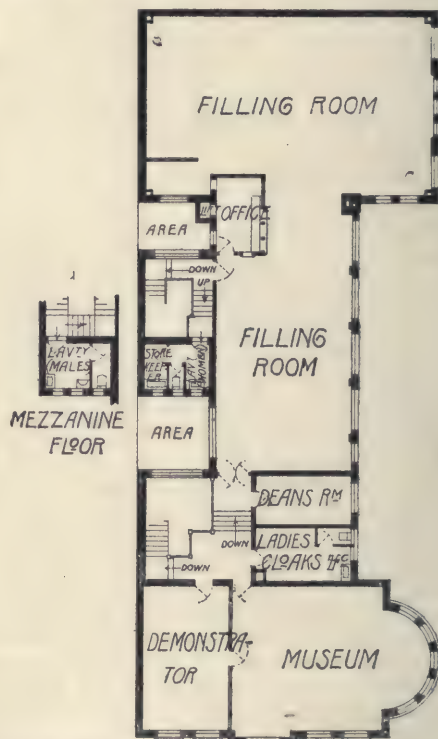
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OXFORD ROAD
GROUND FLOOR PLAN.



FIRST FLOOR PLAN.



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SECOND FLOOR PLAN.

bodies. The necessary instruction is also provided for students who, having served an apprenticeship in dental mechanics with a registered dental surgeon, take the final courses of their professional training at the hospital.

The new building occupies a corner site in the Oxford Road, and is lighted fully on three sides and partially on the fourth; the site therefore would appear to be admirably suited for the purposes of the hospital in the matter of light, so all-important for dental work. The entrance and exit for patients are on the ground floor, and are separated by the porters' office, which thus commands both. A large waiting-hall adjoins the patients' entrance; on one side of this hall is a large curved bay window, separated from the rest by a glazed screen, the precise object of which is not apparent. A staircase leading out of the waiting-room is, we presume, for access to the sanitary offices. The department for extraction is on this floor, and comprises a room for ordinary extraction (i.e. without anæsthesia), with a recovery-room adjoining; a room for extraction under anæsthesia, with separate

of dental surgery. There is a large laboratory with bench accommodation for 50 students, with a separate laboratory for advanced students, and a private room for the surgeon in attendance. On this floor also are a committee room and a lecture hall. The "conservation," or filling room, is on the second floor, and consists of one large room with an office. Accommodation is here provided for more than 50 chairs, each of which has a standard for cabinet, bracket table, electric motor, light, and spittoon, with hot and cold water and salivary ejector. A steriliser for instruments and students' cupboards are also provided. On this floor also is a room set apart for the instruction of new students, and a museum. Lavatory accommodation for patients of both sexes is provided on this floor and on a mezzanine. The hospital is lighted throughout with electric light, and is provided with a power current for lathes, engines, and dental furnaces. The building strikes us as remarkably well planned and well lighted in every part, and reflects much credit on the architects, Messrs. Charles Heathcote and Sons, of Manchester.

NEWS AND COMING EVENTS.

SIR ERNEST F. G. HATCH has been unanimously elected Honorary Treasurer and Chairman of the Royal Ear Hospital, Dean Street, Soho.

THE Treasurers of the Middlesex Hospital have received a further donation of £200 to the General Fund from Lieutenant-Colonel H. J. Hope-Edwards.

THE Duke of Argyll will preside at the 64th anniversary dinner of the German Hospital, Dalston, which will be held at the Whitehall Rooms on Friday, May 7.

A FESTIVAL DINNER in aid of the funds of the East London Hospital for Children, Shadwell, E., will be held at the Ritz Hotel on Wednesday, April 28. Field-Marshal Lord Grenfell will preside.

THE annual general meeting of the Medical Sickness and Accident Society will be held on Thursday, May 27. Prospectuses and all further information can be obtained on application to Mr. F. Addiscott, secretary of the Society, 33 Chancery Lane, London, W.C.

A MATINÉE in aid of the funds of the Army and Navy Male Nurses' Co-operation, a Society for the employment of duly qualified sailors and soldiers, to which we drew attention at its inception last year, will be held at The Playhouse, by permission of Mr. Cyril Maude, on June 22.

THE Princess of Wales has given her patronage to the amateur theatrical matinée in aid of the Hospital for Women, Soho Square, and the East London Hospital for Children, Shadwell, which is being organised by Mrs. William D. James. Miss Lena Ashwell has kindly lent the Kingsway Theatre for the performance, which will take place on May 6. The play to be produced is "The Mollusc."

PRINCESS ALEXANDER OF TECK will open the new Out-patient Department and Nurses' Home of the Royal National Orthopaedic Hospital on Tuesday, April 20. The new buildings are in Great Portland Street, and the committee hope to arrange the opening of the new hospital itself during the coming summer. The treasurers, Lord Farquhar and Sir Richard Martin, have received a donation of £500 from the Goldsmiths' Company towards the reduction of the building fund debt of £25,000.

THE Gilchrist Studentship for Women has been awarded by the Senate of University of London to Miss Enid Margaret Walters, M.B., B.S., London (Royal Free Hospital) School of Medicine for Women. The Studentship is of the value of £100, tenable for one year, and is open to graduates in Honours of the University, of not more than three years' standing from first graduation, who are prepared to take a course of study in an approved institution in preparation for some profession.

A White Paper has been issued by the Home Office containing tables of cases of industrial poisoning and accidents in factories and workshops in 1908. During the year 646 cases of lead poisoning were reported, and 32 deaths resulted from this cause. In addition to those included in the table 239 cases and 44 deaths were reported amongst house painters and plumbers. Ten cases of mercurial poisoning were reported and 23 of arsenical poisoning, as against seven and nine respectively during the previous year. Cases of anthrax numbered 47, as against 58 in 1907.

THE next examination of candidates for commissions in the Royal Naval Medical Service will commence on May 10. The number of commissions to be granted will be fifteen. Further particulars will be supplied on application to the Medical Director-General, Admiralty, 18 Victoria Street.

THE Prince of Wales has promised his patronage to a three days' bazaar and fête which the students of University College and Hospital are organising for the purpose of raising the £7,000 required to pay off the debt on their athletic ground and to make it their own freehold property. The Duke of Connaught will open the fête on the first day, July 1.

At an inquest held last week by Dr. Danford Thomas at Marylebone, on the body of a married woman, aged thirty-six years, the medical evidence showed that the cause of death was undoubtedly an overdose of quinine. The woman had taken 25 grains, and the post-mortem disclosed congestion of the brain, liver, and lungs. The other organs were healthy, and she was ordinarily a very healthy woman.

THE Prince and Princess of Wales, Prince and Princess Christian of Schleswig-Holstein, the Duke and Duchess of Connaught, Princess Louise Duchess of Argyll, and Princess Henry of Battenberg have given their patronage to the annual festival ball in aid of the Italian Hospital, Queen Square, which will be held at the galleries of the Royal Institute of Painters in Water Colours, Piccadilly, on Monday, May 10.

THE Duchess of Albany and Prince and Princess Alexander of Teck were present on March 19 at a musical and literary entertainment in aid of the National Hospital for the Paralysed and Epileptic held at 13 Carlton House Terrace, by permission of Sir Edwin and Lady Durning-Lawrence. Her Royal Highness, as President of the Jubilee Committee of the hospital, is now making a special appeal for £50,000 to celebrate its completion of 50 years of work. The entertainment attracted a large gathering, and the proceeds amounted to £244.

A REPORT on the work of the Central Midwives Board has lately been issued as a White Paper. It deals with the period from the formation of the board in 1902 to March 31, 1908. On March 31, 1908, the number of names on the roll amounted to 23,634, but the report assumes that this figure is considerably in excess of the truth. It estimates the number of certified midwives in practice at present at 15,000. An important part of the board's work has been the exercise of its penal jurisdiction. In spite of the fact that the number of midwives reported by local supervising authorities for malpractice, negligence, or misconduct increases yearly it is believed that the board's administration of its penal powers has had a salutary effect on the conduct of the midwives in those districts in which the charges have arisen. The reports of the medical officers of health universally show the increasing value of the Midwives Act, though during the five years that it has been in operation various defects have appeared in its working. The most important of these are, first, the difficulty of collecting the contributions of the local supervising authorities; and, secondly, the omission to provide for the payment of the fees of medical practitioners summoned in emergencies on the advice of a midwife.

ON March 24 the Prince of Wales received Sir William Church, Chairman of the Executive Committee, and Dr. E. F. Bashford, Director of the Imperial Cancer Research Fund, and considered the affairs and progress of the Fund, of which he is President.

THE Medical Officer of Health for Bristol has issued a circular stating that of eight persons infected by a smallpox patient from outside the city on February 16, seven are now convalescent, and that there was only one notification last week. The outlook is most favourable, and no further cases are anticipated.

ACCORDING to a Reuter's telegram from Berlin, dated March 26, Professor Greef, Director of the Berlin University Eye Hospital, claims that he has discovered the germ of trachoma, which, he says, is, in form, between a bacterium and a protozoon. As a result of the Professor's experiments with anthropoid apes, which he was enabled to carry out by means of a Government grant, he ascertained that trachoma is only contagious in the first stages.

THE St. John Ambulance Association has received from Lord Rothschild, Chairman of the British Red Cross Society, two Diplomas of Honour, forwarded by Prince Hilko, Secretary of State to his Majesty the Emperor of Russia and President of the Russian Red Cross, awarded to the Association by the Committee of the Empress Marie Féodorovna Funds for the diminution of the sufferings of the sick and wounded in war. These Diplomas are awarded, one as a mark of approval of the litter on wheels exhibited at the eighth Red Cross Congress in London, 1907, and the other in recognition of the good work done by the Ambulance Department of the Order of the Hospital of St. John of Jerusalem in England for so many years past both in war and peace.

IN aid of the Queen Alexandra Sanatorium at Davos an important *matinée* on a very large scale will be given on Tuesday, May 11, at Drury Lane Theatre. Mr. Arthur Collins has lent the theatre, and all the leading dramatic and variety artists have offered their services. The Queen, who is Patron of the institution, is taking a box, and on the suggestion of the President, Lord Balfour of Burleigh, the Council has agreed to place a bedroom at the disposal of the dramatic profession for every £500 realised by the *matinée*. The Sanatorium is designed for English-speaking persons suffering from pulmonary complaints who are able to pay a small fee but cannot afford hotel prices. It cost £36,000 to build, of which only £6,000 now remains unpaid.

THE Education Committee of the London County Council report that a scheme for medical inspection has been submitted to the Board and approved by them. The Board do not insist upon their full requirements being carried out in respect of every child. The modified scheme provides that the complete inspection of every child admitted to or leaving school shall be in a limited number of schools, while in a further number of schools individual examination will be conducted, but the records will not be so elaborate as those prescribed by the regulations of the Board of Education. Individual examination will be made for the most part only when the children present abnormality. The committee propose that when the school doctor considers medical treatment necessary a notice shall be sent to the parents or guardians informing them of the nature of the child's affection and advising them to consult a doctor. They also propose that the parents and teachers shall be encouraged to attend the inspection of individual children.

THE Therapeutical and Pharmacological section of the Royal Society of Medicine will meet at 20 Hanover Square, W., on Tuesday, April 6, at 4.30 p.m., when Dr. Gordon Sharp will read a paper on "Experiments and Experiences with the Heart Tonics—Pharmacological and Clinical," and Dr. William Bain on "The Action of the Digestive Ferments upon each other."

THE Postmaster-General has decided that, in future, candidates for post-office employment who have conscientious objection to re-vaccination may be allowed exemption therefrom on making a statutory declaration to the effect that they conscientiously believe that re-vaccination would be prejudicial to their health. The Postmaster-General has refused, however, to grant exemption from primary vaccination.

THE REV. WALTER HOWSE, M.A., of Campden Hill Court, W., late Mathematical Lecturer at King's College, London, left the residue of his property to Guy's Hospital, London, in augmentation of its endowment; and if by any chance this legacy shall lapse, it is to revert to Christ's College, Cambridge, at which College he graduated. It is estimated that the bequest to Guy's Hospital will amount to about £25,000.

Two inquests were held at Derby on March 26 on patients at the Derbyshire Royal Infirmary, who died whilst under anaesthesia. The coroner observed that it was a most unfortunate coincidence that two deaths should occur in such circumstances so close together, but there was no evidence of any blame attaching to the medical staff of the institution. In one case the patient was an old man of 76, admittedly in a moribund condition, suffering from blood poisoning, and an immediate operation was his only chance. The other patient was an infant.

THE annual general meeting of the British Lying-in Hospital, Endell Street, W.C., was held on March 23. In proposing the adoption of the report and balance-sheet for 1908 the Chairman pointed out the hospital's progress since 1897, when seven beds were occupied daily, the number now being 22. This increase, and the appointment of a resident medical officer, has rendered most desirable the provision of more accommodation, which it is difficult to obtain and for which funds will be required. The accounts unfortunately showed a deficit of £673 for the year, and further public support is urgently needed.

THE HON. SYDNEY HOLLAND presided on March 23 at the annual meeting of the Poplar Hospital for Accidents, and the report presented stated that the annual subscriptions amounted to £3,134 last year, against £3,180 in 1907, and donations to £4,845, compared with £3,212 in the previous year. In addition £1,285 was received for the building fund of the Convalescent Home. In-patients last year numbered 1,397, an increase of 26. Out-patients and casualties totalled 51,430, an increase of no fewer than 3,000 on the previous year. The total ordinary expenditure for the year amounted to £9,383, as against £9,256 in 1907. Reference was made to the intention of Mr. Holland to retire from the chairmanship. During the eighteen years that he has been identified with the hospital it has been almost entirely rebuilt, at a cost of £66,000, it has been trebled in size, and the reserve fund has been increased from £8,000 to £44,000. In response to the Committee's wishes he has agreed to remain as chairman with Mr. J. G. Brodbank as acting-chairman.

NURSING ADMINISTRATION.

THE QUESTION OF THE REGISTRATION FEE.

FEW matters have aroused more attention in the controversies centring round the registration of nurses than the amount of the registration fee. Nobody can be quite sure how many nurses would offer themselves for registration, and it is, therefore, next door to impossible to form a correct estimate of the fees which would be paid. But the cost of registration is not so difficult to estimate. It must, however, be remembered that registration and examination are two very different processes, and that the amount charged for one would certainly not suffice for both. In Lord Amptill's Bill provision has been made for both examination and registration, and a maximum fee of five guineas has been provided for. This does not, of course, mean that the Central Board would be compelled to charge this amount. It merely means that it could not charge more. Experience shows, however, that the fees which are permissible will be the fees imposed. The Scotch Registration Bill, on the other hand, imposes a maximum of two guineas for registration, but this is on the basis of the examinations being conducted as now in the various training schools and not by a central authority. In the one case the nurses pay the cost of their examination; in the other case the cost is borne by the training school. The matter is one of considerable importance to nurses. Ever since the first establishment of training schools for nurses the privilege of being examined and certificated at the expense of the institution has been enjoyed by nurses. We have often pointed out that the cost of lecturers and examiners is no inconsiderable item in the expenses of probationers. What it amounts to in the aggregate is now ascertained, seeing that the cost of the final or qualifying examination alone is estimated to work out at three guineas. In first rate training schools the process of examination is going on all through the probationer's course, and it may be reckoned that it costs the institution from first to last at least five guineas a head. If the onus of bearing the cost of examinations is thrown on the nurses it will impose a yearly collective charge of at least £6,000 on probationers completing their course. For the number of probationers turned out every year from hospitals containing over 100 beds is approximately 2,000, without counting Poor-law infirmaries. It is interesting to consider the expenses of both registration and examinations.

1. Registration.—The expenses of the department would certainly not exceed the following estimates:

Publication of Register, postage, printing, etc. (cost of corrections being defrayed by nurses).

Rent of offices, salaries of registrar, clerks, etc.

Travelling expenses, etc., of Board, consisting of 15 persons, sitting twice a week for 40 weeks.

A steady rate of 2,000 nurses registering at two guineas apiece would certainly defray these expenses and leave a good margin.

2. Examination.—The expenses would fall under the following headings:

Hire of rooms, cost of postage, stationery, printing, etc.

Cost of setting papers.

Cost of conducting examinations.

Cost of correcting papers.

Cost of conducting *viva voce*.

When it is remembered that the candidates would have at least six subjects to pass in, in addition to *viva voce* and practical demonstrations of efficiency, it is clear that the expense would be considerable. The Scotch authorities seem to be contemplating that the institution would continue to bear the cost of examining their own nurses, and it is probable that they would continue to do so even under the new conditions imposed by the Nursing Council. As in lieu of examiners appointed from among members of the staff, and undertaking their duties for merely nominal remuneration as part of their ordinary work, there would under the registration scheme be outside paid examiners appointed by the Council "to regulate and supervise" the examinations they could not fail to be far more costly than under the present independent plan, although in many respects they would be less costly than if they were altogether dissociated from the training schools.

It is hardly necessary to urge, at the present moment, the advantage to the training school of employing outside examiners. Apart from the objections which can be urged against the practice of "branding your own herrings," there are objections from the nurses' point of view. It is not every hospital which contains men on its staff trained for examination work. It needs a combination of qualities and talents to make good examiners, and a large amount of practice is essential in testing women unaccustomed to express themselves concisely either verbally or on paper. Moreover, the outside examiner can be of the greatest possible value to the head of the training school by indicating strong or weak points in the report, and in making suggestions as to the preparation of candidates. It would be indispensable that the examiners in the nursing subjects should be women, not necessarily medical practitioners, but such as have had experience in training nurses themselves under the best conditions, and with wide knowledge of varied training schools. The right kind of examiners both male and female could prove of the utmost support and assistance to the matrons whose candidates they examined, acting in this way as the examiners do at the public schools for the Oxford and Cambridge Board Examinations. The value of the examination would thus be felt far beyond the sphere of the individual candidates.

It should be clearly understood that the cost of holding the examinations in the training schools instead of at one or two separate centres would not merely lead to a saving of expense, but would also—and this is the important point for nurses—cause the expense to fall mainly on the institution instead of on the candidates.

OBITUARY.

DR. ARTHUR GAMGEE, M.D., F.R.S., F.R.C.P., of 66 Harley Street, died in Paris on Monday in his 68th year. He was Emeritus Professor of Physiology in the Victoria University, and had been assistant physician to St. George's Hospital, London, where he was also lecturer on materia medica in the Medical School. He became a Fellow of the Royal Society at a very early age as the reward of special research work in connection with some of the most abstruse problems of physiological chemistry; and he held, from time to time, a number of important offices in the University of Edinburgh, in Owens College, and in the Royal Institution of Great Britain. Much of his work was conducted in the physiological laboratories of Germany, France, and Switzerland. His "Text-book of Physiological Chemistry," in which much original research was incorporated, has been translated into French and German. Dr. Gamgee was a fine classical scholar and a good linguist. His unexpected death was due to post-influenzal pneumonia. His loss will be felt by a wide circle of scientific men in this country and abroad.

THE death is announced of Dr. Charles Coates, who died on March 23 at his residence at Bath, at the age of 83. Dr. Coates, who had retired from practice about ten years, was the oldest member of the medical profession in Bath. He was for many years, and up to the time of his death, a governor of the Royal Mineral Water Hospital. He was connected by marriage to the family of the sixth Earl of Buckingham. Dr. Coates liberally supported the Bath charitable institutions. He was honorary consulting physician to the Royal School for Daughters of Officers of the Army, Lansdown, a trustee of Partis College, and also of Holburne Museum. He gave £1,000 to the Blue Coat School and a similar sum to the Royal College of Physicians to found a prize. He became a Fellow of the Royal College of Physicians, Edinburgh, in 1857, and of the Royal College of Physicians, London, in 1873. He was formerly resident clinical assistant at the Brompton Hospital for Consumption.

A REUTER telegram from San Remo, dated March 26, announces the death from heart-failure of Dr. Blaikie Smith, a Scottish medical practitioner residing there. Dr. Blaikie Smith graduated at Aberdeen in 1878 with honours, and held appointments in the Medical School and University of that city.

DR. CHARLES ERNEST BAKER last week died suddenly in London at the age of forty-four. He was a Fellow of the Royal College of Surgeons and a Licentiate of the Royal College of Physicians, and he was for four years clinical assistant at the Royal Eye Hospital, Southwark. Dr. Baker had also held appointments at the Royal Orthopaedic Hospital, the Royal Free Hospital, St. Bartholomew's Hospital, and the East London Hospital for Children.

DR. SOLOMON BUENO DE MESQUITA died at Margate at the age of forty-seven. He became a member of the Royal College of Surgeons in 1887, a Licentiate of the Royal College of Physicians in 1888, while he obtained the Bachelor of Science and Doctor of Medicine degrees of

the University of London five years later. Dr. Mesquita was visiting physician to the South Tottenham Home for Incurables, and had been house surgeon to the Miller Hospital, Greenwich, and the Croydon General Hospital.

THE death has occurred at San Remo of Dr. Patrick Blaikie-Smith, who practised till recently at Aberdeen. He was educated at Aberdeen University and Middlesex Hospital, and was consulting physician to the Aberdeen Royal Infirmary and physician to the Invalid Ladies' Home, San Remo. He formerly held the post of assistant professor of chemistry and examiner in medicine at the University of Aberdeen, and that of physician and lecturer on clinical medicine at Aberdeen Royal Infirmary.

DR. ANTONIO GABRINI, of Lugano, Switzerland, professor and physician, who died last November at the age of 94, left property reported to be of a total value of over £1,000,000 sterling, and property in the United Kingdom amounting to £4,235 5s. 1d. He left several bequests for charitable purposes, including 20,000f. to the municipality of Lugano for the erection of a house for the recuperation of indigent persons who are not ill.

LITERARY NOTES.

MESSRS. BALE, SONS, AND DANIELSSON, LTD., announce the immediate issue of a History of the Reading Pathological Society, written by the President, Dr. Jamieson B. Hurry. This Society is one of the oldest medical societies in the country, and has accomplished a large amount of work. Numerous original communications have been published during the past seventy years. The volume will be illustrated by a series of portraits, and contain descriptions of the Medical Library and Pathological Museum. This work should prove of interest to the Secretaries of the various local medical societies throughout the United Kingdom, as with one exception—that of the Royal Medical and Chirurgical Society—such a record is believed to be unique.

MEDICATED SOAPS.

(MESSRS. D. AND W. GIBBS, LIMITED, CITY SOAP WORKS, LONDON, E.)

WE have received from this firm samples of fourteen of their medicated soaps. These preparations include antiseptic soaps, which are impregnated with carbolic acid, iodoform, boracic acid, and so on, as well as the more strictly medicated soaps for use in various forms of skin disease. The different drugs used are presented in an excellent state of purity, and have been combined with the soapy ingredients in a thoroughly satisfactory way. They are pleasant to use, and efficient both as cleansers and as a means of obtaining the local action of the particular drug used upon the skin. The different medicated soaps contain respectively: Sulphur, 10 per cent.; white birch tar; ichthyol, 5 per cent., and tar; eucalyptol, 5 per cent.; sulphur, camphor, and balsam of Peru; corrosive sublimate, $\frac{1}{2}$ per cent.; borax, naphthol, and sulphur; boracic acid, 5 per cent.; salicylic acid and sulphur; carbolic acid, 20 per cent.; resorcin, 2 per cent.; β -naphthol, 5 per cent.; ichthyol, 5 per cent.; and iodoform, 2 per cent. They can be recommended to members of the profession who are desirous of using any of these drugs and combinations in the form of a soap.

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SATURDAY, APRIL 10, 1909.

A CRITICISM OF HOMŒOPATHY.

A MEETING was lately held at the Mansion House, under the presidency of the Lord Mayor, to inaugurate a national fund in support of homœopathy; so one must suppose that this cause, like that of orthodox medicine, is pressed for funds. Homœopathy has always made a great stir for its size, and even now the word is often heard. Yet the world at large knows little of what homœopathy really stands for. Moreover, homœopaths have claimed of late that the recent advances of vaccine and serum treatments are evidence in favour of their contentions. So it may not be amiss to review the history of homœopathy and rebut the fallacy contained in this assumption.

Homœopathy is a system of therapeutics based upon the dogma "*similia similibus curentur*"—"Let similars be treated by similars." The system was given to the world in 1796 by Hahnemann, and is founded upon the belief that diseases are to be cured by drugs capable of producing in a healthy individual symptoms similar to those of the disease to be treated. Strychnia on this assumption would, we suppose, be the natural remedy for tetanus, and ether-inhalations for bronchitis. But here we speak with diffidence, not being well posted in the later glosses upon the text. In addition, Hahnemann promulgated a theory to account for all chronic diseases. They were, he said, all derived, directly or remotely, from one or other of three sources—namely, the itch, syphilis, or sycosis. This remarkable conception, it is sad to relate, had but a limited vogue, and one quite disproportionate to its monumental originality. Nevertheless, it is well to bear in mind that the originator of homœopathy was capable of producing such a conception, for homœopaths are not wont to boast about it. A third item of importance in the creed is the doctrine of minute doses. This doctrine was, we are told, a later creation of the founder, and totally distinct from the basal law quoted above, although in the minds of many it is the most prominent feature of present-day homœopathy. Lastly, Hahnemann taught that "even after the material medicinal particles of a drug have been subdivided to the fullest extent, the continuation of the dynamisation, or trituration, or succussion, develops a spiritual curative agency,

and that the higher the potency the more subtle and more powerful is the curative action." Such were the tenets of the father of homœopathy. His course appears to have been dictated by a feeling of revolt against the complicated and futile concoctions which filled the pharmacopœias of his day; and we do not deny that his creed may have exercised a salutary influence upon the ignorant drug-vending which filled so large a place in the medicine of the time. Nor need we doubt his sincerity in his beliefs, for he suffered much on their account.

Few things are more remarkable than the ease with which new religions and new systems of treatment obtain a vogue, and keep it in spite of persecution, of ridicule, of demonstrable absurdity, and an infinite variety of other disadvantages. The fact is a commentary upon the credulity and conservatism of mankind in general; but it is a singular thing to see men of the world, who in the ordinary matters of life follow the dictates of reason, surrendering their judgment to a long-exploded superstition. We should not have bestowed any concern upon this business were it not for the fear that money urgently required for the prosecution of scientific medicine may be diverted, through the ignorance of benefactors, into the superstitious channels of homœopathy. It is for this reason that we wish to expose the fallacy that vaccine-therapies are of the essence of homœopathy, as supporters of the movement are fond of claiming. That the confusion should have been admitted for a moment is evidence of the uncritical faculty without which such creeds as homœopathy are doomed to early death. The fallacy in brief is this. To the homœopathist the symptom of a disease is everything, the cause nothing. What matter though convulsions may be due to tetanus or epilepsy, strychnia or uræmia? There are the convulsions, and *ex hypothesi* strychnia should cure them. On the other hand, the principle underlying vaccine therapy is that the introduction into the body of a disease-producing substance in a modified and little-virulent form enhances the protective forces of the body against more powerful and virulent examples of that particular substance. It will be seen that from this

point of view the symptoms of the disease are nothing to the point, but the cause everything, since specificity is the key-note of vaccine therapies. The abiding distinction between scientific vaccine-treatment and the homœopathic principle can be made clear by an example. Both the tubercle bacillus and the bacillus coli communis may attack the bladder and give rise to symptoms of cystitis. Scientific medicine says that the appropriate vaccine for tuberculous cystitis is one prepared from tubercle bacilli, and for the other variety one pre-

pared from the corresponding organism. But the creed of homœopathy would justify its practitioners in classing both varieties together and treating them indifferently with tuberculin or bacillus coli vaccine, regardless of the nature of the disease, and merely on the score that the symptoms are alike.

The ease with which even astute minds surrender their judgment and allow themselves the luxury of loose thinking must be generally recognised from the attendance at the Mansion House meeting of men with a public history.

LONDON STUDENTS AND MEDICAL DEGREES.

THE long-standing problem touching the inaccessibility of medical degrees to students of medicine in London seems to be at last on the way to solution. This at least is the hopeful reflection which arises from perusal of the report recently issued upon the subject by the delegates of the Royal Colleges who were appointed last autumn to draft a scheme for establishing a system of joint examinations between the Colleges and the University of London. The draft has been made and adopted by both Colleges, and communicated to the University with a request that representatives of the latter should meet the College delegates and discuss the business. So the movement is well under weigh.

It is fully time the problem were grappled with, for several reasons. In the first place it is a decided hardship that the diplomate of the English Royal Colleges should lack the imprimatur of a medical degree although the tests to which he has successfully submitted himself are certainly not less severe than many of those which, out of London, lead directly to the coveted distinction. Moreover, this hardship is an important element in the reduction of numbers in the London medical schools. It would seem, therefore, that, from the standpoints both of equity and expediency, the time has fully arrived at which an attempt should be made to render medical degrees more attainable to London students than they have been in the past. The University and the Colleges draw to a very large extent upon an identical *clientèle*, and their fortunes are closely interwoven. Yet, under the present arrangement, a student desirous both of a London University degree and of a conjoint diploma must submit himself to two examinations in identical subjects—often within a few months. For the control of medical education in London, whether concerned with the University or with the Colleges, is largely in the same hands, while the general character of the examinations and the methods of conducting them are very similar in the two cases.

The need for greater co-ordination and simplicity in this matter of examination is emphasised in the report of the delegates, and it cannot be denied;

for the existing practice is absurdly complicated, troublesome, and expensive. The points of contact between the University and the Colleges both in matters of *personnel* and of *matériel* are so numerous that the step to a more useful intimacy is not a long one, and seems, indeed, predestined. The delegates of the Colleges, at all events, have expressed a clear opinion that, provided there is a general desire on the part of the University, the Colleges, and the Medical Schools to unite in a concerted effort to provide an accessible degree in medicine, there should be little difficulty in arriving at an equitable and advantageous solution of the problem. They make the following suggestions:—That the University should retain all its existing rights as to the granting of degrees, but should consent to exercise them, *as regards Pass Degrees*, conjointly with the Royal Colleges so far as those students are concerned who shall have complied with such conditions as the University and the Royal Colleges may determine. By these means the University would continue to grant independent degrees in medicine and surgery, which would be of the nature of, and might be designated as, Honours Degrees, thus meeting the views of those who maintain that the present degrees of the University of London are of an Honours standard. The Royal Colleges, for their part, it is urged, should retain all their existing rights, and would continue independently to grant diplomas to those who are not eligible for the conjoint degree under the conditions laid down, or who do not desire it. The final recommendation is that the Colleges and the University should be associated for the conduct of all stages of the examination for the Pass Degrees (M.B., B.S., M.D.). It is maintained that the adoption of these suggestions will bring a Doctor's degree in Medicine within the reach of the average London student; that it will systematise medical education, and diminish the number of examinations which at present lie in the way of a man desirous both of a degree and a diploma; that by this means the natural advantages of London as a school of medicine will present themselves more clearly to students; and finally that a large amount of money will be saved.

ANNOTATIONS.

The Social Problems of Tuberculosis.

AT the time of the late International Tuberculosis Congress at Washington some uncertainty attended the reports of the actual and authoritative resolutions passed by that body at the termination of the meeting. The version of the official delegates of the United Kingdom (Dr. Newsholme for England and Messrs. MacDougall and Stafford for Scotland and Ireland respectively) is now available, and reads as a temperate, well-considered pronouncement upon the social problems involved in the disease in question, although perhaps very few now living are likely to see established "night-camps for ambulant cases of tuberculosis which cannot enter hospitals and sanatoria." The conveyance of infection from man to man is designated the most important source of the disease, the corollaries of segregation of advanced cases and obligatory notification receiving due mention. Unfortunately the discussion of these measures, although they are in all probability highly necessary, is only too likely to inflame inconveniently that dread of infection which the lay mind so readily entertains. More hospitals and sanatoria are called for, and legislation for the hygienic regulation of factories and dwelling-houses approved. All this, down to the provision of children's playgrounds, means money; in fact, these resolutions do but reiterate the truth that all anti-tuberculosis measures are largely a question of economics. Perhaps the really most profitable field for medical precept lies in the instruction in personal hygiene which is recommended in all schools for the professional training of teachers. In the case of the British lower classes—and, of course, they form the bulk of the nation—the taste for the open window and the clean epidermis must be inculcated early, or not at all.

A Scale of Fees.

AN interesting attempt to set up a standard scale of fees in the capital of South Australia, Adelaide, has been recently made by the local branch of the British Medical Association. It is to be understood that the scale binds no one, not even the members of the Association; but it has been drawn up and recommended, and as the charges are the minimal, it can only be said that it is to be wished that the same held good in Britain. An ordinary visit "first class" is from half a guinea upwards, and "second class" from seven and six. We are not told how the distinction is made; but in a country where the poorest are less poor and the wealthiest less wealthy than here, it is probably easier to divide patients into two classes, only than in Great Britain. An evening visit is labelled seven and six to one guinea; a night visit (11 P.M. to 8 A.M.) one guinea and upwards. Mileage, by day is reckoned at five shillings, by night ten shillings, per mile. When a visit is paid to more than one member of a family, and the fees are paid by one person, half fees are to be charged for each person after the first. Major operations, however, seem to be cheap in Australia: from ten guineas upwards is laid down, exclusive of after attendance. Minor operations are scheduled at two to ten guineas, and administration of a

general anæsthetic are one guinea and upwards. An interesting generalisation is that in which it is held that in the case of major operations the anæsthetist and the assistant should each receive a sum equal to 10 per cent. of the operator's fee. This sum total seems fair, but in view of the much greater importance and responsibility of the anæsthetist's position, we should prefer to see the percentages revised in his favour to twelve and a half and seven and a half respectively. There are also a number of scales for contract practice given, and for expert evidence, insurance work, certificates of lunacy, and so forth. Of these it need only be said that they do not differ much from fees in this country, except for club practice; in respect of the latter the South Australian schedule is one to make the mouth water of any club doctor in this country.

Compensation Problems.

TO the knotty points, both legal and medical, arising out of the various Workmen's Compensation Acts of recent years, reference has more than once been made in these pages; and the supply shows no signs of diminution. Thus a remarkable case came before the Appeal Court on March 26, concerning which the decision of the County Court was reversed. The circumstances were, briefly, that a workman sustained a mutilating wound of the right hand so severe that he barely escaped amputation. However, by careful treatment, including operative manipulations under chloroform, the hand was saved, and he was left with a member which would in time have been functionally nearly perfect, provided contraction were avoided. In order to secure this he was again anæsthetised for the purpose of skin grafting, but unfortunately died under chloroform. The Court of Appeal found that the second operation was in reality a postponed but essential part of the first one, and performed with the object of restoring the man to working life in the interests of those from whom compensation was due; and thereon, that the case must be treated on the same footing as if the original accident had caused death. We quote this case as a sample merely because it is quite recent; scores of similar difficult problems have come into Court for decision, and those who see much of this work, whether from the legal or the medical aspect, are reaching conclusions which show remarkable unanimity. There seems no doubt that malingering has been directly fostered by these Acts. Two points connected therewith touch especially our profession. One is the disgraceful arrangement which has sprung up, according to an eminent lawyer, between a certain sort of practitioner and an even more despicable kind of solicitor, to the effect that the former, when giving evidence in support of a claim, is to receive fees only if the suit is successful. The other is the pressing need for the presence of competent medical assessors to assist County Court judges in those not infrequent cases where a conflict of opinion arises, honestly or otherwise, between the medical witnesses produced by the two sides.

MEDICAL OPINION AND MOVEMENT.

THE Hunterian lecture on X-ray Carcinoma before the Royal College of Surgeons by Mr. C. W. Rowntree sums up our present knowledge of its incidence and the results, so far, of experimental inquiry. He emphasises the low degree of malignancy of these forms of cancer, and the comparative youth of most of the sufferers. As bearing on the question whether the effect is merely that of long continued irritation, strictly comparable with the causes of epithelioma in sweep's warts, paraffin eczema, Paget's eczema, and so on, or whether there is some specific action of the rays, attention is called to the multiple nature of the growths in five out of the eleven cases of x-ray cancer now reported in this country, whereas in the other precancerous conditions enumerated any resulting malignant growth is practically always single. By experiments on animals it seems to be established that the first effect of the rays in doses insufficient to cause dermatitis and burns is a stimulant one: and that when long continued this is exchanged for a destructive action, which is, however, to a certain extent selective; that is, it affects certain tissues more than others. The action of the rays upon the hairy scalp and upon the secreting cells of the testis is itself evidence of such selection. The importance of a clear perception of the cell-activating properties of small doses is made plain by the lecturer's suggestion that possibly the disappointing results in many cases of epithelioma treated by x-rays may be due to stimulation of the deeper parts of the growth coincident with destruction of the more superficial parts.

IN the Long Fox memorial lecture delivered at Bristol, Mr. J. H. Parsons chose as his theme the Metastatic Inflammations of the Eye. After discussing the ophthalmic manifestations of general blood infections, as by streptococci, gonococci, and so on, he dealt with the pathology of two of the most obscure diseases of the eye, iridocyclitis and sympathetic ophthalmia. Mr. Parsons holds that iridocyclitis, even when apparently idiopathic, is really a result of metastatic inflammation. Pyorrhœa alveolaris is the commonest primary focus; failing that he searches for suppuration in the nasal sinuses, the genital organs, or, failing these, the alimentary canal. In support of the last possibility he finds that many cases do well on calomel and other intestinal antiseptics, and suggests the lactic acid bacillary treatment. As for sympathetic ophthalmia, he remarks that it has all the characters of a disease due to bacteria, and that the failure hitherto to discover the specific organism is no proof of the contrary. The migratory theory of transmission by way of the optic nerves and chiasma is now abandoned, and the lecturer prefers the metastatic theory of infection by the blood. He explains the selection of the opposite eye for the secondary outbreak by supposing the organism to be only pathogenic to the eye, because there alone does it find a suitable nidus, and only then if the conditions of tissue resistance are favourable. Prolonged latent period is accounted for by encapsulation in the exciting eye or, in rare

cases, in other organs of the body. He considers that the organism undergoes development in the exciting eye, thus accounting for the usual latent period. The conception is an interesting one.

THE Cause of Fatigue was recently discussed by Sir Lauder Brunton during a debate at the Medical Society reported in the *Clinical Journal*. The quickened pulse and respiration were until lately regarded as chiefly of mechanical origin, but Sir Lauder now adopts the views of Mosso as to the production of definite toxins by the muscles during exertion. Thus he has found that if a narcotised dog be transfused with blood from a dog which has been at rest, no effect is produced upon the pulse and respiration; when, however, that of an animal which has been tetanised is employed, acceleration of both rates is produced just as if the narcotised dog had itself been tetanised. From this conception he passes on to that of fatigue antitoxins, which are, he believes, produced in the system in response to the fatigue toxins, just as antivenims in response to small doses of snake venom, and diphtheria antitoxin when diphtheria bacilli are used. The principles so well known of the immunising effect, owing to the formation of these antibodies, of small commencing doses, gradually increased, are utilised to explain the phenomena of the familiar process of "training." The athlete begins his course of training, if he is wise, with quite gentle exercise, thus auto-inoculating himself with fatigue toxins and causing an output of corresponding antitoxins. Gradually he increases his dose of fatigue, at the same time multiplying enormously his capacity for making fatigue antibodies; and thus he is able after a few weeks' training to endure exertion, that is to say, to neutralise toxins, by which he would when untrained be completely prostrated.

BONI contributes to a recent number of the *L'Ospedale Maggiore* a résumé of cases of Early Typhoid Fever with a view to throwing light on the diagnosis of this condition. Taking a very large series of cases, he found that the most positive evidence is furnished by blood examinations, regularly and systematically undertaken. This was positive in no less than 92 per cent. of cases. The other signs which are of great value in furnishing diagnostic data are the typhoid tongue, on which he lays stress, as it was shown in 90 per cent. of cases, enlargement of the spleen (85 per cent.), the diazo-reaction (83 per cent.), and headache (80 per cent.). Lower down in value, and in order of their relative importance, he places albuminuria, diarrhoea, ileocæcal gurgling, serum diagnosis, typhoid spots, a dicrotic pulse, and a slow pulse rate in relation to the temperature. None of these, however, can outweigh the value of a regular blood examination, to which he attaches the greatest importance.

THESE findings are of interest in view of the fact that in private practice the early diagnosis of typhoid fever is of the greatest importance, and it is not always easy for the practitioner to avail himself of the services of an expert bacteriologist. Under these conditions he has to depend largely on an examination of the patient, and to base his diagnosis on such points as he can make out from that examination. The diazo-reaction, which has of late years been almost disregarded as a diagnostic factor in this disease, is well worth further study, and to the practitioner at least it should prove a valuable test when taken in conjunction with other signs. Alone its value is, of course, exceedingly doubtful, since it is now well recognised that it is given in many other conditions, and is, in fact, present whenever there is any bacterial infection of the blood. It is, however, a striking testimony to the value of this reaction that the author should place it so high in his list of diagnostic signs—much higher, in fact, than he places serum diagnosis. Boni disregards the other early signs on which some authorities have recently laid stress, such as the yellow pigmentation on the palms of the hands. According to him they are too inconstant and too vague to be of great diagnostic value, and when they are present one or more of the other signs are usually to be found present as well on close examination.

ATTENTION has been already drawn in these columns to the method adopted by certain surgeons on the Continent of allowing patients to get up within three or four days after abdominal operation. Dr. Schücking, writing in the *Zentral-Blatt für Gynäkologie*, advocates in preference gymnastic exercises in bed. They should be carried out at first for half an hour twice a day and should be specially directed to the use of the muscles of the thorax and abdomen. The pulse and blood-pressure should be watched, and the exercises regulated accordingly. The author has used the method especially for patients after labour, and after gynecological operations, but he has also found these exercises in bed very effective in cases of anæmia with feeble heart action and in cases of dilated heart. They improve the tone of the general system as well as strengthening the muscles, and by activating the circulation they tend to prevent the occurrence of thrombosis and embolism. It certainly seems more rational to innervate the general muscular system by such exercises if it be deemed necessary or desirable after operation, than to resort to the more heroic method of allowing the patient to walk about, and, as the author points out, all the advantages claimed for the latter method are obtained by the exercises in bed without any of the inconveniences and risks which are necessarily incurred by movements in the upright position.

DR. A. L. MENTZIKOVSKY, of St. Petersburg, who has made a special study of the Incontinence of Urine in Children, has formed the opinion that the pathology of this morbid condition consists chiefly in the degree of sensitiveness, and of vascu-

larity of the mucous membrane of the bladder and urethral canal. He distinguishes two types. In the one the mucous membrane of the urinary passages is extremely sensitive and hyperæmic. The least touch excites acute pain with intense reaction, so that it is impossible to introduce a catheter without a general anæsthetic. The second type is, on the contrary, characterised by diminished sensibility, and the interior of the bladder and urethra can be explored without causing any reaction on the part of the child. In the first case the smallest accumulation of urine in the bladder occasions a reflex contraction of the muscles and causes a continual incontinence of urine. In the second case the sensibility of the mucous membrane of the bladder is so diminished that the reflex contraction of the sphincter vesicæ is not called forth except by special volitional control, and nocturnal incontinence results. This distinction of the two types enables the appropriate treatment to be applied. In the first type of cases the author resorts to daily local applications of cocaine solution with adrenalin, first to the urethral passage and then to the bladder itself, combined with the internal administration of bromide. In this way the sensitiveness is gradually diminished and the bladder becomes accustomed to retain the urine. For the second type of case the author advocates injections of 1 to 3 per cent. silver nitrate solution twice a week, in order to increase the vascularity and sensitiveness of the parts. He thinks that the mechanical irritation by instrumentation for the introduction of the solution contributes largely to the cure.

IN this country the treatment of Enlarged Prostate by operation almost exclusively involves suprapubic prostatectomy. The excellent results obtained by Freyer and others by this method have led to its general adoption, and the old perineal route has been to a large extent discarded. At a recent meeting of the French Academy of Medicine a discussion of the subject showed a great preponderance of opinion in support of operative treatment for this condition, and the suprapubic method also found most favour. This does not, however, appear to be the case in America. In a paper by Dr. C. Eugene Lack, of Brooklyn, on the subject the different methods of treatment are reviewed, and the author shows that the perineal method of operation as carried out by Young is able to yield, at any rate in his hands, better results than have been obtained by suprapubic prostatectomy. Thus, Freyer's mortality in his first 322 cases, with 25 deaths, was 7.8 per cent., in his last 119 cases, with 9 deaths, 7.5 per cent., showing that with improved technique he has not appreciably reduced his mortality. On the other hand, Young reports 273 cases treated by his operation, which he terms conservative perineal prostatectomy, with 8 deaths or 2.8 per cent. In his last 146 cases there was only one death, and Young explains that this might have been avoided. Young claims that these cases were wholly unselected and that every case appearing for relief was operated upon, although some were already in *extremis*. As Dr. Lack puts it, the operator with the least mortality is entitled to the centre of the stage, and he unhesitatingly gives the choice, therefore, to Young's method of operation. The advantages

claimed for the operation are that perfect drainage is secured, the ejaculatory ducts, the seminal vesicles, and the prostatic urethra remain intact, and the patient can control his urine two days after operation and is out of bed in three or four days. Young is of opinion that perineal prostatectomy is not only the safest operative procedure, but also much safer than the use of the catheter.

IN the *International Journal of Surgery* Dr. Wither-
spoon draws attention to what he considers an error in the method of Draining the Peritoneal Cavity for general peritonitis. This error consists in draining the peritoneal cavity by means of a drain passed down into the pelvis through an incision, say, for appendicular abscess. Such a drain, the author points out, necessarily passes down between the bowel and the lateral wall of the pelvic basin. This produces adhesions of a very dense tight character between the bowel loops and the unyielding peritoneum covering the pelvic fascia, and in turn this leads to kinking or inflammatory narrowing of the bowel at this fixed point. In support of this statement the author gives details of several cases in which drainage by this method resulted in the development of symptoms of obstruction soon after the operation. These were relieved by a second operation, at which in each instance the state of things described above was found to exist. In cases of appendicitis, therefore, necessitating drainage of the general peritoneal cavity, the author advocates the following method of procedure: the usual incision is first made and the appendix is dealt with according to the circumstances and conditions of the case, and a puncture is then made just above the bladder upon the index finger of the left hand introduced through the wound. A glass tube is introduced through the puncture and carried into the pelvis, guided by the finger. This places the drain between the loops of the intestine and the posterior wall of the bladder, and does not therefore induce adhesions between the bowel and a fixed point, such as the lateral pelvic wall. It is thoroughly efficient in draining the peritoneal cavity with the patient in a good Fowler position. A second drain placed in the wound about the head of the cæcum quickly induces adhesions which close off this portion of the bowel from the general cavity and fixes the cæcum alone to the lateral wall of the false pelvis. The author claims to have had most gratifying results by this method of drainage.

THE Sterilising Effect of the X-Rays upon the Sexual Organs has been known for some time; but until quite recently it was uncertain whether a similar influence was exerted upon the pregnant uterus. Fraenkel, of Berlin, would now seem to have settled the question by the employment of the rays in the case of a pregnant phthisical patient suffering from intractable vomiting of pregnancy, for whom ordinary surgical interference was absolutely contraindicated by her bad general health. Twenty-five applications of the rays for periods of from five to ten minutes each, without other interference, whether by vaginal examination or surgical procedure, re-

sulted in spontaneous expulsion of the foetus, accompanied by pain and rather severe bleeding, which latter, however, stopped when the uterus had expelled its contents. The author recognises the folly of trying to evolve a general rule from a single fact; but if his observations are confirmed by subsequent workers, yet another use may have to be added to the already long list of therapeutic applications of the x-rays. One cannot, however, avoid the conclusion that if the rays really possess this property a powerful weapon, and one which, if skilfully employed, no physical examination could possibly detect, will be placed in the hands of the criminal abortionist.

LE FILLIATRE claims to have demonstrated the superiority of Intraspinal Injections of Cocaine over similar injections of stovaine, and in addition proposes to substitute such injections for general anaesthesia by chloroform, etc., in most operations, including those on the head and neck. We have already devoted much space to this and kindred topics; but since the principles and practice of spinal analgesia are still very much *sub judice*, it is important to record the views and results of all earnest workers in this field. Le Filliatre bases his conclusions upon the study of 1,500 cases in which cocaine has been used in the manner suggested, and his series extends over a period of six years. He suggests that from 10 to 30 c.c. of cerebro-spinal fluid should first of all be withdrawn from the theca spinalis. From $\frac{1}{2}$ to 2 c.c. of a 2-per-cent. solution of cocaine should then be injected; the preliminary withdrawal of cerebro-spinal fluid prevents hypertension in the cord and the headache which follows. The author claims for his method freedom from post-anaesthetic vomiting and shock, and from the inevitable risks of general anaesthesia. Other observers, however, whose mode of injecting cocaine differs little in essentials from the above, have recorded unpleasant and even serious after-effects. In straightforward cases the balance of danger to the patient from post-anaesthetic mishaps is, in the opinion of most observers, decidedly in favour of chloroform, ether, and their congeners. The damage caused to the blood elements by the temporary passage through them of these poisons compares favourably with the nervous shock and the paralysis which may follow the most carefully regulated intraspinal injections of cocaine. It is difficult, moreover, to conceive any stage of an operation at which the assistance of its conscious and willing subject could be preferable to that of ordinary helpers; whilst the objections to the probability of the patient seeing and hearing all that takes place around and upon him are obvious. Spinal analgesia is, and will probably remain, infinitely more popular with continental than with British surgeons, if only for the reason that on this side of the Channel the patients' feelings, mental and bodily, are always taken into considerable account. With these observations, Le Filliatre's conscientious advocacy of cocaine as a medium for spinal anaesthesia in cases unsuited to chloroform or ether, is worthy at least of critical study and investigation.

HOSPITAL CLINICS.

SOME POINTS IN THE DIAGNOSIS AND TREATMENT OF DISEASE OF THE AORTIC VALVES.

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(A Lecture delivered at the Polyclinic.)

I PROPOSE this evening to discuss disease of the aortic valves. I have recently been going through the notes of the last 500 completed cases I have seen at the Hospital for Diseases of the Heart, and certain facts in connection with the cases of aortic trouble have forcibly impressed themselves on my mind. The classical text-book description of a typical case of aortic regurgitation is familiar to you all, but for the sake of clearness you will, no doubt pardon me if I cite a case and recapitulate the principal symptoms, signs, and anatomical and physiological pathology.

TWO CASES OF AORTIC REGURGITATION.

Henry W., general labourer, aged 46, came to hospital on September 26, 1907, complaining of pains in the chest and pain running down the left arm; at times he "felt a fluttering" in his chest (obviously palpitation), and occasionally had dizzy faint feelings. These symptoms had been present more or less for four years, but without shortness of breath or marked dyspepsia. Recently he had suffered a good deal from sleeplessness, and he explained that "the fluttering" in his chest was what kept him awake. There was nothing of importance in his family history, and the only previous illnesses that he knew of were childish ailments such as measles, whooping-cough, and two attacks of influenza. There was no history of rheumatic fever, scarlet fever, chorea or syphilis. He had drunk somewhat freely and his work had always been heavy and laborious. On examination he was found to be a well-developed, rather stout man; the pulse was of a typical collapsing or water-hammer character, the carotid, brachial and other arteries showed marked and visible pulsation. The apex beat was situated in the sixth interspace, a little outside the left nipple line, and was sudden and forcible. On percussion the area of cardiac dulness was not found to be enlarged to the right, but was considerably increased downwards and to the left. On auscultation, a well-marked diastolic murmur was heard with maximum intensity at the sternal end of the second right costal cartilage, but it could also be heard down the right side of the sternum. A second sound was audible on listening over the arteries in the neck.

On everting the lower lip and placing a microscope slide on the mucous membrane, the mucous surface was seen to blanch and redden with the pulse. I may here mention that I have found this a much more convenient method of demonstrating a capillary pulse than rubbing the forehead or pressing the nail. In short, the case was as clear a one of pure aortic regurgitation as anyone could wish

to see. The man's age, and absence of any history of rheumatism or sudden symptoms made it almost certain that the regurgitation was due to atheromatous changes in the aortic valves. Now, what history are we to give to the morbid conditions? and what is the explanation of the symptoms?

As the result of his strenuous occupation, aided no doubt by the alcohol he indulged in, probably in the first instance his blood-pressure rose and increased strain was put upon the aortic valves, in consequence of which atheromatous changes occurred: thickened, and shrunk, or puckered, they no longer perfectly closed the aortic orifice during the ventricular diastole, and consequently regurgitation took place into the left ventricle. As this regurgitation took place while the muscle was at rest, and blood was also flowing from the left auricle, the ventricle would tend to become overcharged and distended; consequently at the next systole it would have more work to do, and more blood to discharge into the aorta.

As a result the left ventricle became dilated, but this put the heart muscle at a disadvantage, for by a physical law, which I need not pause to discuss here, the exertion of each muscular fibre, if the pressure of the blood in the aorta is to remain constant, varies as the cube of the radius of curvature of the ventricle. You see therefore that if there was no hypertrophy, and the diameter of the ventricle was doubled, the work of the muscle would be increased eight-fold. In this case, as the nutrition of the ventricle was good, increased work meant increase of muscular fibre, and hypertrophy of ventricle occurred; thus the dilatation and hypertrophy compensated for the regurgitation.

Since, however, the left auricle had to discharge its blood into a ventricle which was being partially filled by blood under pressure from the aorta, it also would become somewhat enlarged and hypertrophied. It is, therefore, easy to account for the increased size of the left side of the heart as shewn by percussion, and since at this stage no increased work is thrown upon the right side we can easily understand why the increase of cardiac dulness was entirely downward and to the left, and not to the right as we find it in mitral disease.

The diastolic murmur was caused by the blood whistling under pressure from the aorta, through the chink left by the imperfectly closed aortic valves into the dilating or passive left ventricle. The reason that it was best heard at the second costal cartilage was that the sound was conducted along the wall of the aorta which here comes nearest to the surface. It may be asked why it was not heard at the apex of the heart, since one imagines that the regurgitated

stream flowing into the ventricle would impinge upon the apex, and that the sound would be carried in the direction of the flow of the blood; but we must remember that the amount of blood regurgitated is necessarily much less than that flowing in from the auricle, and as the two streams meet the aortic current will be deflected. It is true in certain cases that an aortic diastolic murmur may be heard with maximum intensity about the second interspace, and be conducted up and down the sternum, lost as we move the end of the stethoscope to the left, and heard again over the apex beat; but I should say more frequently it is inaudible at the apex. What is the explanation of the water-hammer pulse? If we take a sphygmographic tracing of such a pulse, we find that there is a sudden and greater rise of pressure than usual. This is due to the enlarged and hypertrophied ventricle sending a larger quantity of blood more forcibly than normally into the arteries, which, during diastole, had probably contained blood at somewhat less than normal pressure. This sudden rise is followed by an equally sudden and rapid fall, due to the fact that the blood is not held up by the aortic valves, but some of it regurgitates into the ventricle. As a result of the sudden distension of the arteries, their elastic recoil is greater than normal, and consequently the fall is followed by a well marked diastolic wave, and so during the diastole the pressure is below normal.

Anything which increases the strain on the aortic valves, anything which aids the fall of blood, will increase the water-hammer character of the pulse; consequently it is brought out more markedly by lifting the arm. No doubt the faintness and dizziness complained of in well marked aortic incompetence on suddenly rising from a stooping posture and the like, is due to the action of gravity causing diminished pressure in the cerebral vessels.

Palpitation is no doubt accountable for by the enlarged and hypertrophied ventricle beating more violently, and by nutritional changes at times increasing the rate of the heart's beat. But how are we to account for the pain down the left arm? On looking over the notes of a large number of cases of valvular lesion I have been struck with how uncommon this symptom is in mitral disease. In cases of aortic disease I should say that it is distinctly most frequent in those due to atheroma. I should not like to insist too strongly on this point, but my impression is that it is distinctly in favour of atheromatous changes in the valves and in the neighbouring part of the aorta. If this is so why should the pain radiate down the arm instead of being confined to the chest? We must first remember that any pain is not really felt by the part affected, but by the brain. When we say we feel a pain in our hand, what we really mean is that a certain sensation has reached our brain by the sensory nerves coming from the hand, and that by experience we have learnt to associate this impression with the hand. The instance of the man whose arm had been amputated feeling a tingling in his fingers is known to you all. A study of development shows that the body may be mapped out into zones, each of which corresponds to the area of distribution of the posterior root of one of the spinal nerves. The first dorsal root conveys

impressions from the ulnar side of the forearm and lower half of the upper arm, while the second dorsal is concerned in the sensation of the upper half of the inner side of the upper arm, the third and fourth cervical, correspond to the shoulder and a portion of the neck. But the sympathetic nerves also correspond to segments of the cord, and the sympathetic nerves supplying the aorta from the valves to the level of the origin of the innominate artery may be considered to correspond to the third and fourth cervical and first and second dorsal segments. Impulses arriving by the sympathetic fibres from the aorta, reaching the grey matter of the third and fourth cervical and first and second dorsal segments, may radiate to the posterior horn, and consequently these impressions be referred to the area of distribution of the corresponding sensory fibres. Sometimes, but far less frequently, pain is complained of in both arms.

I have taken the case just cited because it was so clear and simple, but in my experience it is comparatively rare to find a simple aortic diastolic murmur with accurate location. Far more commonly the murmur is double, and we find a systolic as well as a diastolic murmur. Let me quote another case.

Elizabeth K., aged 48, caretaker, complained of palpitation, feeling of tiredness, and pain in the left side of chest for two months. Sleep poor; slight dyspnoea on exertion; a faint diastolic and louder systolic murmurs heard with maximum intensity in the right second interspace, near the sternum, and conducted down and across the sternum; the systolic, but not the diastolic, heard at the apex beat, which was situated in the sixth interspace an inch outside the nipple line. No second sound was audible in the vessels of neck; the area of cardiac dulness was long, enlarged to the left, but not to the right of the sternum; the apex beat was forcible, but diffuse; both water-hammer and capillary pulse were present; a heaving pulse could be detected in the veins, and there was a well-marked Durozier's sign. As I have not mentioned Durozier's sign, I may explain that it is a double murmur heard on listening with the stethoscope rather firmly pressed on one of the great arteries, the femoral for choice; it is practically diagnostic of aortic regurgitation, and is produced as follows: The pressure of the stethoscope causes a constriction of the artery. The blood rushing through this narrow portion into the wider part beyond at the systole of the pulse produces a systolic murmur, which can be heard in a healthy subject. When marked aortic regurgitation is present there is a backward flow during the diastolic phase, and this causes the diastolic murmur.

What is the explanation of this case? Had the woman in question aortic stenosis as well as regurgitation? I think not. The marked water-hammer pulse, the capillary pulse, and Durozier's sign are against it, as is the absence of thrill. While a double aortic murmur may be present without stenosis, so also a presystolic murmur audible at the apex, is not certain proof of mitral stenosis. I will not weary you by repeating the full account of such a case, but will content myself by assuring you that I have heard such a murmur in several

cases. How are we to account for this murmur, which was first described by Austin Flint, and is called after him? Let us think for a minute of what is happening in the left ventricle; the blood regurgitating from the aorta into the ventricle impinges on the anterior or aortic flap of the mitral valve, and so narrows the orifice through which the blood flowing from the auricle has to pass: thus with the auricular systole a presystolic murmur is produced, though there is no organic mitral stenosis.

A CASE OF AORTIC STENOSIS.

I now want to direct your attention to a case of a very different character. John S., aged 54, hotel porter, was admitted to hospital on September 25, 1907. He had rheumatic fever at the age of 25, and suffered on and off for 25 years from palpitation; but this had never been very bad until a year before admission, when he had severe dyspnoea as well, and the palpitation became more continuous. On examination, the apex beat was found in the sixth interspace, $\frac{3}{4}$ inch external to the left nipple line; the impulse was heaving and forcible; the area of cardiac dulness extended $\frac{3}{4}$ inch beyond the left nipple line, though very little increase was detected to the right; the pulse was weak, small, and slightly irregular, rate 70. Auscultation showed a long, blowing, systolic murmur all over the præcordia; it was difficult to say what was the point of maximum intensity, but a systolic thrill could be felt over the base of the heart. A very short, soft, faint diastolic murmur was occasionally audible in the aortic area and along the right border of the sternum. The pulmonary second sound was accentuated, and in the mitral area the second sound was reduplicated. There was some dulness at the base of both lungs; the liver was palpable and tender three inches below the costal margin; there was no cedema of the legs, nor albuminuria.

For the first fortnight he seemed to improve, had no bad symptoms, and complained of no pain. The diastolic murmurs varied considerably: some days more or less distinct, on others inaudible, or very indefinite and heard only over a very limited area. On October 13 he began to be troubled with dyspnoea, and the pulse became extremely irregular and at times very weak; there was slight increase of cardiac dulness to the right of the sternum and some cedema of the lungs. Albuminuria appeared, but apart from the discomfort of the dyspnoea he had no pain. He gradually became weaker, and died on Oct. 27.

Post-mortem, the heart weighed 21 ounces. There was great concentric hypertrophy of the left ventricle with some dilatation. The right side was moderately dilated, the muscle was pale and showed pheasant-wing markings, the pulmonary and tricuspid valves were healthy, but the tricuspid orifice was dilated and the valves incompetent to the water-test. The mitral valves showed slight thickening at the edges, but no vegetations. The orifice admitted four fingers readily and showed slight incompetence to the water-test. The aortic valves showed extreme change; there was a large deposit of calcareous matter; two of the valves were fused into one calcareous mass, making the orifice narrow and

slit-like. It is probable there was little or no regurgitation, because at the edge of the thickened and hardened valves there was a thin, narrow band of flexible membrane, which closed the chink when water was poured into the aorta.

We have here a case of aortic stenosis of long standing, in which muscular degeneration led to mitral regurgitation, increased pulmonary pressure, and tricuspid regurgitation. Let us trace out in detail the probable course of events. As the result of his rheumatic fever the aortic valves became thickened, and, though still competent, the orifice was narrowed. The left ventricle had increased difficulty in driving the blood during the systole through the narrowed aortic orifice. The ventricle became hypertrophied and the systole was prolonged, increased strain being thrown upon the mitral valve as a result of this and the comparatively slow delivery of blood into the aorta. The pulse wave would rise slowly, and would not reach the same height as normal, because much of the force of the hypertrophied ventricle would be used up in overcoming the resistance at the aortic orifice. Since the systole was prolonged while the ventricle was driving its steady stream of blood through the narrowed orifice, the systolic pulse-wave would be long sustained and fall slowly. Sometimes the ventricle makes as it were two attempts to get the blood past the obstruction, and we find on a sphygmographic tracing that the top of the pulse curve is notched, the so-called *pulsus bisferiens*. We see that the pulse tracing of aortic stenosis is exactly the converse of that of aortic regurgitation, and to the finger the pulse feels small, weak, and prolonged, and utterly different to the collapsing water-hammer pulse.

STENOSIS WITH REGURGITATION.

Having discussed cases of pure aortic regurgitation and one of practically pure aortic stenosis, which is very much rarer, let us now consider cases where there is both aortic stenosis and regurgitation. I must first observe that aortic stenosis with regurgitation is frequently diagnosed by the inexperienced in cases where there is regurgitation alone, the observer being misled by such a case as the second I mentioned, where a double murmur is audible over the aortic area. On June 27, 1907, I saw at the Heart Hospital, Samuel B., aged 33, a fitter's labourer. There was nothing of importance in his family history. The patient had had three attacks of rheumatic fever, which had occurred when he was seven, 16, and 25. He complained of pain at the heart, palpitation, and occasional dizziness. On examination he was found to have a large heart of the shape typical of both aortic regurgitation and stenosis. You will have remarked that so far as percussion is concerned, both lesions give the same indication. The apex beat was diffuse and forcible, a well marked double murmur was audible over the aortic area and down the sternum; the diastolic portion could be heard at the apex, and the systolic was audible in the vessels in the neck. On placing the hand on the base of the heart a well marked thrill could be felt, and a thrill was also palpable in the carotids. The pulse was neither large, sudden, nor collapsing, nor was it of

the small prolonged character typical of aortic stenosis. There was no capillary pulse, nor could Durozier's sign be made out. I diagnosed the case as one of combined stenosis and regurgitation of the aortic valves, in which the stenosis was well marked. The main points to bear in mind are these. The diagnosis depends chiefly upon the character of the pulse; if with a double murmur you have a well marked water-hammer pulse, capillary pulse, Durozier's sign, and pulsating carotids, you may pretty safely exclude stenosis; but if the murmurs point to the combined lesion, and percussion and palpation confirm it, while the pulse is slow, small, and though it may be slightly collapsing, is far from being a typical water-hammer, then some stenosis is probably present. The character of the impulse of the heart is of some importance: in stenosis hypertrophy is the first and main change in the ventricle; while in regurgitation dilatation is more marked. Consequently the heart in stenosis tends to be smaller and the impulse slower and more heaving than in regurgitation; the apex beat in stenosis sometimes seems to push against or lift the chest wall, whereas in regurgitation it seems to strike it.

REGURGITATION WITHOUT VALVULAR LESIONS.

So far I have dealt with cases in which the stenosis or regurgitation has been caused by changes in the valves themselves. Is aortic regurgitation possible without the actual valves being affected? The following is a case in point:

Roland S., aged 33, cabdriver, was admitted to the hospital, November 18, 1907. As he was not quite clear-headed on admission, the history had to be obtained from friends, and was probably imperfect. The only previous known illnesses were inflammation of the lungs and four attacks of influenza. For several months he had complained of pain over the cardiac area and some dyspnoea; for the last few weeks the dyspnoea had been worse, and he had suffered from insomnia; he had had a cough for about a week. On examination he was found to be a well nourished man, the capillaries of the face were dilated, the arteries hard and thickened, the pulse was peculiar, the wave rising rapidly and falling quickly, but there was considerable tension between the beats; in fact, it may be permissible to describe it as a water-hammer pulse with a very high tension.

The apex beat was in the sixth interspace, two inches external to the nipple line, the left limit of cardiac dulness was two inches external to the nipple line, and the right a little over an inch to the right of the edge of the sternum. On listening to the heart, a loud blowing systolic murmur was heard, having two points of maximum intensity—namely over the aortic area and at the apex; it was difficult to say at which of these two it was the louder. A soft blowing diastolic murmur was heard with maximum intensity at the aortic area. The liver extended three inches below the costal margin and was tender, the lungs were dull at both bases, but moist crepitations could be heard. The urine was scanty, high-coloured, and contained albumin, there was slight oedema of the legs. On November 21 he became delirious, and died eight hours later.

The aorta was found tremendously dilated and atheromatous about the valves, but the valves themselves were absolutely healthy. The aortic orifice admitted three fingers easily, and it was obvious that aortic regurgitation had taken place during life. The left ventricle was greatly hypertrophied and dilated. The muscle was pale and showing signs of fatty degeneration, the mitral valves were healthy, but the mitral ring was dilated. The tricuspid and pulmonary valves were all healthy. Both auricles were enlarged, and fluid was present in both pleural cavities. Organised lymph covered the lower lobe of the right lung, which was carnified. Both kidneys showed typical changes of contracting large white kidney. The liver was enlarged and nutmeg. Here we had to do with a case of renal disease; as a result of the increased peripheral resistance which this disease produces the blood-pressure rose and caused hypertrophy of the heart. While the hypertrophy could keep pace with the increasing peripheral resistance all went well, so far as the heart was concerned; but the high blood-pressure caused atheroma and dilatation of the aorta; this, assisted, no doubt, by the hypertrophy and dilatation of the left ventricle, caused the aortic orifice so to enlarge that the normal aortic valves became incompetent to close it, and the symptoms and signs of aortic regurgitation occurred, followed by those of mitral regurgitation.

DEATH IN AORTIC REGURGITATION.

Now let us discuss the ways in which aortic regurgitation causes death. There are two main groups, and since the pathology of these has a considerable bearing on the treatment I propose to go into them in some detail.

On November 14th, I saw George O., aged 33, a printer. He complained of tightness round the heart, some shortness of breath, much palpitation. These had been worse for six days; he could not say how long they had gone on. He had never had rheumatism or rheumatic fever, and remembered no previous illness. He was a very heavy drinker. On examination a greatly enlarged heart was found, extending below the seventh rib a little outside the nipple line. A well-marked double murmur was audible at the base of the heart, and a suspicion of thrill was palpable. Durozier's sign could be heard in the femorals, and the vessels in the neck showed visible pulsation. The pulse was not definitely of a water-hammer character. No capillary pulse could be detected, nor could the second sound be heard in the vessels of the neck. The case was diagnosed as one of aortic regurgitation with possibly slight stenosis. On November 27th, while undertaking rather violent muscular exertion he suddenly dropped down dead.

What was the cause of this man's sudden death? I have already pointed out the great strain that the blood regurgitating from the aorta during diastole throws upon the dilated left ventricle, and I have drawn your attention to the fact that the work the ventricular muscle has to do varies with the cube of the radius of curvature of the ventricle, so you will easily understand that a point may be reached in any case of aortic regurgitation where a comparatively

slight, sudden increase in the dilatation of the ventricle causes the work demanded from the ventricular muscle to be more than it can accomplish. Possibly a feeble abortive contraction takes place; possibly the muscle refuses to respond at all, but the heart stops and the patient falls suddenly dead. In this man's case his heavy drinking had probably increased the degeneration in the cardiac muscle, and the rise of blood-pressure produced by the muscular exertion in which he indulged just before he dropped dead was enough to bring the ventricle to a standstill.

LINES OF TREATMENT.

I need not detail the post-mortem findings; suffice it to say that he was a man who died as the result of aortic disease, and aortic disease alone; the other valves had not become secondarily affected. You see the immense importance of doing everything possible to avoid an increase of the dilatation of the left ventricle. Of course, we must avoid everything which tends to produce degeneration of the muscle, but it is obvious that in increased resistance to the flow of blood through the arteries and capillaries to the veins lies the greatest danger. Where this is high, the left ventricle is called upon to make a greater effort during systole, and is exposed to a greater strain during diastole than if it is low. In cases of pure aortic regurgitation, therefore, our efforts should be directed to lowering this resistance, so that the amount of force required during systole to keep up the circulation is as low as possible. My own practice is to give a mixture containing bromides and iodides to these cases. I have never been able to convince myself that iodide of sodium has any practicable superiority over iodide of potassium; either will do, but I am sure that the addition of bromide of potassium is advantageous, possibly partly because it quiets the nervous system, and we know that the blood-pressure is largely influenced by the emotions. The various vaso-dilators, such as amyl nitrite, trinitrin, erythrol tetranitrate are also useful, but should not, I think, be given as a matter of routine. Belladonna combined with bromide and iodide is often beneficial. Where there is sleeplessness, as is not infrequently the case, a hypodermic injection of morphia is often of the greatest service. Digitalis should not be given in this class of case; the great and chief action of digitalis is to increase the tonus of the vascular muscle, and while it is true that it may somewhat help the muscle of the ventricle, on the whole it does more harm than good by increasing the contraction of the peripheral arterioles and possibly also lengthening the diastole. I have more than once seen patients in the stage of aortic disease under discussion relieved of pain down the arm and in the chest by stopping the digitalis which had been injudiciously given. It is said that strophanthus causes less peripheral constriction than digitalis, and so is safer, but even this drug, I think, is better avoided if the mitral valve is competent. The heart muscle may be sustained and stimulated, if desirable, by strychnine, but remember strychnine is incompatible with iodide of potassium, as it forms an insoluble iodide. You can, however, if you wish, prescribe them together if you add a drachm of alcohol

to each ounce of the mixture, as the alcohol will keep the iodide of strychnine in solution. I need not dilate on the importance of avoiding sudden and severe muscular exercise, violent emotion, or other like causes of increased blood-pressure, nor the importance of the patient pursuing a quiet, even life, as these will be obvious to you all.

There is, however, another class of case where aortic regurgitation has gone on for some time, producing the conditions in the ventricle already described, without any sudden rise of pressure causing sudden death, but where as the result of the gradual dilatation of the left ventricle the mitral valve becomes incompetent; when this occurs, the danger of sudden and dramatic death is to a certain extent lessened, but a new series of symptoms arise. Before, the difficulty which the left auricle had to face was that of pouring, during its systole, the blood it contained into a possibly partly filled ventricle, but now added to this it has a stream of blood under pressure forced into it during its diastole by the contraction of the ventricle, consequently the auricular dilatation increases and the pulmonary blood-pressure rises, so greatly increased work is thrown upon the right ventricle, and changes occur in the right side of the heart. For a time the increased pulmonary pressure may be compensated by hypertrophy of the right ventricle, but in a heart already seriously altered from aortic regurgitation this compensation is not, as a rule, long maintained; the right ventricle dilates, tricuspid regurgitation takes place, and we get engorgement of the systemic venous system with the usual symptoms of enlarged liver, cedema of the legs, and possibly ascites; in fact, the case which was primarily aortic regurgitation now puts on the symptoms of mitral disease and terminates as mitral cases do.

This is the class of aortic case in which digitalis and its congeners are useful. The peripheral vaso-constrictor action of the drug is of less importance, because the regurgitation through the mitral orifice acts to a certain extent as a safety valve. Consequently when the left ventricle contracts there is not the same fear of it being unable to complete its contraction, so there is less risk of a sudden strain bringing it to a standstill, while the beneficial effect of the drug on the cardiac muscle is more marked because the right ventricle is now becoming embarrassed and needs its assistance. Speaking generally, we may say, when in a case of aortic regurgitation the mitral valve has given and the right ventricle is becoming embarrassed, digitalis or strophanthus are beneficial. The signs of failure of the right ventricle are, of course, those of pulmonary engorgement, enlarged liver, and cedema. But while we give digitalis in these cases, there is no reason why we should not at the same time endeavour to lessen the peripheral resistance, and the action of the digitalis should be carefully watched. The large doses permissible and advisable in cases of pure mitral regurgitation should not be given, and directly the right ventricle has somewhat recovered itself the drug should be stopped, for you will easily see that if we have toned up the left ventricle sufficiently to stop, even for a time, the mitral regurgitation, all the dangers of digitalis referred to before again come into play.

MEDICINE.

EXAMINATION OF THE PUPILS—I.

THE best known example of the assistance in diagnosis that may be derived from an examination of the pupils is probably the Argyll-Robertson pupil of locomotor ataxy—a pupil which reacts to accommodation but not to light. It is in consequence of this that a pupillary examination resolves itself, as a rule, into a rapid testing of the light and accommodation reflexes and nothing more. This, however, is a pity, for the behaviour of the pupil is sometimes of considerable diagnostic significance in other diseases; and there should be just as much precision and sequence in the methods of examining the pupils as there is with the heart, lungs, and abdominal organs. It is true that palpation, percussion, and auscultation have no part in any examination of the pupil. Inspection alone must suffice; but the inspection can be made under varying conditions.

In the first place it is important to be sure that any anomaly of the pupils that may be present is not due to any anatomical or pathological lesion in the iris itself. We are at present dealing with the pupil as it is influenced by diseases of the nervous system, and we must therefore assume that steps have been taken to exclude the existence of iritis, glaucoma, keratitis, or other gross ocular lesion. Two allied conditions that deserve particular mention, in order that they may not be accidentally overlooked, are, first, the possibility of atropine having been put into one eye, or both, only a short time previously; and, secondly, the possibility of the patient having a glass eye sufficiently mobile to deceive one if he does not tell one that it is glass.

Assuming that the iris is itself healthy, the first point to note in examining the pupil in a case presenting nervous symptoms is its actual size. It is at the same time important to specify the kind of light the patient's eyes were exposed to at the time. The brighter the light the smaller do the healthy pupils become, and the same sized pupil that might be unnaturally small if it occurred in a dim light might be the natural size for a bright light.

For purposes of reference and comparison it is as well to have the diameter of the pupil stated in absolute figures. It is no very difficult matter to hold a tape measure or other scale close under the eye and read off the size of the pupil in sixteenths of an inch or in millimetres, as the case may be. This will obviate any personal differences there may well be in the use of descriptive adjectives such as "minute," "small," "medium," and "large." Actual measurements of the pupil are easy to make, and the additional accuracy is worth the trouble.

As regards the points that abnormality in the size of the pupil may teach, one may mention first of all the markedly contracted pupils of many cases of locomotor ataxy. It is quite possible, of course, for a person suffering from this disease to have normal-sized or even large pupils; but in most cases of tabes they are small, and sometimes extremely small. A markedly and persistently contracted con-

dition of the pupils, especially in a man of worn, prematurely aged appearance, is highly suggestive of tabes dorsalis, and this quite apart from the use of opium or morphia for the relief of lightning pains.

The other condition which gives rise to markedly contracted pupils is morphinism or the opium habit. The former is readily confirmed by discovery of the needle marks which may be found on various part of the body, especially the left arm in a right-handed person; but the latter is much less easy of detection if the patient chooses to conceal the fact that he takes opium in some form or other habitually. The urine may sometimes serve for the detection of the habit, if it is collected in bulk, concentrated, and tested for the alkaloid.

When the pupils are persistently and markedly dilated a suspicion will arise that the patient is applying some lotion containing atropine or homatropine to them; women sometimes do so with the idea of adding to their personal charms.

In cases of coma, the absolute size of the pupils is sometimes of great diagnostic importance, the two best known conditions that produce both coma and extremely minute or pin-point pupils being acute opium or morphine poisoning and pontine hæmorrhage. The pupils may be fairly small in some other acute conditions, notably in one stage of alcohol poisoning. In opium poisoning a sub-normal temperature is to be expected, whereas pontine hæmorrhage very soon causes a rise of temperature or even hyperpyrexia. The further differential diagnosis will depend upon the age and sex of the patient, the history, the condition of the heart and vessels, retinae, and urine.

Widely dilated pupils in association with delirium or coma are not pathognomonic of any one thing. Many of the causes of coma may give rise to very large pupils, but the largest of all are seen in belladonna poisoning. If accidental, the commonest cause of this is the eating of the cherry-like berries of deadly nightshade by children; in adults acute belladonna poisoning may come about in the same way, but more often it is due to the accidental or suicidal taking of some preparation of atropine or belladonna.

(To be continued.)

A PAPER on the Treatment of Pulmonary Tuberculosis with Ichthyol, modestly, but probably correctly called "hastily-written," was read by Dr. Odell before the recent National Tuberculosis Conference in London. The cases, 123 in number, were treated at the Western Hospital for Incipient Consumption, Torquay, since 1901. No mention is made of controls. The dose given is 7-10 minims thrice daily after food. The results claimed are freedom from hæmoptysis, diminished cough and expectoration, and an increased sense of well-being. It is stated that only one patient died, and this as the result of tuberculous meningitis.

SURGERY.

TUBERCULOUS DISEASE OF THE HIP.

III.—OPERATIVE TREATMENT.

THE earlier stages of this disease and their treatment have been described in recent articles, and it was there pointed out that a large percentage of cases, if diagnosed early and efficiently treated from the beginning, recover with rest and mechanical appliances, and an excellent functional result is often obtained, without any limitation of movement at the hip-joint. Unfortunately, however, this is not invariably the case, and, either because the patient has little inherent resistance to the tubercle bacillus or because treatment has been half-hearted, the disease progresses from bad to worse.

The question will then arise whether it is advisable to excise the joint or not. Some surgeons advocate early excision, without waiting for abscess or sinus formation, the argument being that in this way free access can be obtained to the joint cavity, and all the diseased material can then be removed. But it is not an operation which should be lightly advocated or undertaken. At the best the functional result is far from satisfactory, and the patient afterwards walks with a most ungainly gait, the great trochanter, which is now the highest part of the femur, slipping up and down on the dorsum ilii, and being arrested only by the attachments of the gluteal muscles to that bone. The consequence is that the patient's progression resembles that of a case of congenital dislocation of the hip. We are, therefore, strongly of opinion that all conservative methods should be given a thorough trial before recourse is had to excision of the femur.

Further than this, as Cheyne and Burghard point out, it is rarely if ever possible to remove the whole focus of disease by an open operation, and therefore it cannot be claimed that either local recurrence or general infection are guarded against by this means. Nevertheless they do think that there are certain cases in which the procedure is justifiable: these are (i) those in which the disease is obviously making active progress in spite of thorough conservative treatment, and (ii) those in which the primary disease is not in the femur but in the acetabulum, because here it is impossible to get free access to the acetabulum without previously removing the head of the femur.

In the cases which do not react to conservative treatment abscess formation is certain to occur sooner or later; and then it is not a question of whether to operate or not (since the individual cannot of his own accord get rid of caseous material), but rather of what operation should be performed, that is, whether the abscess should merely be opened and drained or whether advantage should be taken of the fact that an incision has been made to remove the head of the bone and get rid of all the diseased tissue.

Here again we are in favour of doing only so much as the circumstances of the case demand, the rationale of the procedure being, as in all cases of chronic abscess, to remove the caseous material and allow the bactericidal properties of the patient's own serum to have a chance of arresting the disease. For even although an ankylosed joint may result, such

a condition is vastly preferable to the deformity resulting from excision of the head of the bone. It is, of course, good practice to remove any obviously diseased tissue and to scrape the joint cavity if this is feasible. But a question on which diverse opinions are held, and on which no such definite law can be laid down is whether any antiseptic solution should be injected into the cavity. The one most commonly advocated is iodoform emulsion. The practice has been attacked on the ground that it can be shown in the laboratory that iodoform emulsion has no active power of destroying the tubercle bacillus, and, secondly, that fatal cases of poisoning have been recorded from the absorption of this drug into the system; they are, however, admittedly rare. Solutions of corrosive sublimate used in the early days of antiseptics to be employed in this way, and disasters from this cause were not uncommon. Our own experience of iodoform emulsion goes to show that it facilitates recovery; but it is, of course, possible that this is merely a coincidence, and that the cases would have been done as well without the employment of the drug.

If on opening the abscess and exploring the joint a loose sequestrum is felt, it should be removed. In advanced cases the whole head of the femur may be found lying loose in the joint cavity, and it should be taken away, since Nature has already performed an excision of the joint, and no conservative method can then prevent deformity.

In some cases the wound heals rapidly after the drainage of an abscess; but in others (and these unfortunately form the majority) a persistent sinus results. This is the outcome of one of two causes—either there is a portion of dead bone left at the bottom of the abscess cavity which acts as a chronic irritant, or else the wound has become secondarily infected at the time of operation or during subsequent dressing with one or other of the pyogenic micro-organisms. This points to imperfect technique. It is a fact which has only been sufficiently recognised in recent years that every surgical operation should be conducted with complete antiseptic precautions. The presence of an abscess, especially a chronic one, does not justify laxness in this respect. Lamentable results may occur through the superadding of a second infection.

When a sinus has formed it must be carefully probed to see if any dead bone lies at the bottom, and if any can be felt the sinus must be enlarged and the sequestrum removed. If none is found, the pus should be examined microscopically, and if a second infection is present the micro-organism present should be cultivated and the patient's resistance to it be raised by vaccine therapy. By this means the pyogenic organism can generally be eliminated, and then the sinus can be enlarged and scraped, and if care is taken with the dressings and after-treatment it ought eventually to heal. It must, however, be recognised that the treatment of abscesses and sinuses is a side-issue. The disease can only be cured by adequate rest, as outlined in the preceding articles.

DISEASES OF CHILDREN.

ADOLESCENCE.

THE age of adolescence, from twelve to eighteen years, hardly receives sufficient attention in medical literature; and yet it is in some respects of peculiar importance. It is the age of accelerated physical and psychical development, by leaps and bounds rather than a steady progression, varying greatly in different children. The growth of bones and muscles is rapid. In girls it is most marked at 12-15 years; in boys at 14-17 years of age, and it takes place rather earlier in large than in small children.

Important functions arise and develop. Sex asserts itself. At this period the development of normal periodicity in girls is of the utmost importance, and should take precedence of that of muscle and mind. The frame is preparing for maternity. The voice changes. Vaso-motor instability is great, and exhibits itself in blushing, orthostatic albuminuria, fainting, etc. Sensations of taste and smell are more epicurean and psychical. Individualities become differentiated. Sentiment, self-consciousness, love, religious feeling and ambition arise. It is the age of hopes, ideals, and tender sentiments. There is a craving for knowledge of body and mind, and a delight in rhythm, music, and singing. Yet the ideas are inchoate, the mind lacking in precision and conscious power, and there is a liability to exaggeration and excess, and the feelings fluctuate rapidly in character. Even now the general tendency is objective rather than subjective, and training should be manual, gymnastic, in sports and games, industrial as well as mental and moral.

At this age the liability to the diseases of childhood is much reduced, and diseased processes take on the adult type. Those which are peculiar to this period depend upon the arrest, defect, or excessive development of some organ or function. Hence we find hooliganism, perversions, juvenile crime, and secret vice. Many of the so-called disorders of adolescence are due to remedial causes, and are really independent of age, except in so far as the age modifies the mode of life and education. Thus we can ascribe to insufficient sleep, defective hygiene, the bad print of school books, unsatisfactory diet, and examination strain, such minor affections as anorexia, dyspepsia, constipation, headache, anæmia, visual defects, epistaxis, and nervousness. Spinal curvature, most common at six to fourteen years of age, but occurring at fourteen to seventeen years of age in 5 per cent. of the cases, may be due to the above conditions; bad positions at work, unsuitable desks and seats, and the debility consequent on too rapid growth.

The diet should be very liberal at this age. It is simply astonishing what large amounts these children eat with comfort and impunity. A liberal supply of calcium is needed for the rapidly growing bones, of iron for the blood, phosphorus for the brain, protein for muscle, carbohydrates for exercise, fat for heat, and oxygen for metabolism. Let those in authority at boarding schools see that such needs are amply provided for. Slight cardiac failure, usually of short duration, may result because the growth of the body

is more rapid than that of the heart, which nearly doubles its size at puberty. Hence arise languor, feeble pulse, shortness of breath, and palpitations. Old cardiac mischief, notably any adhesion of the pericardium, is apt to lead to signs of cardiac failure. Cardiac arrhythmia may depend on insufficiency of muscle or on nervous causes. Nervous palpitations are not uncommon in girls for a few weeks or months before the first menstruation, in conjunction with anorexia, dyspepsia, constipation, inertia, irritability, and sleeplessness. Tall, rapidly growing, thin, non-anæmic girls at this period may suffer from a sense of fulness and shortness of breath, and exhibit hypertrophy of the left ventricle. Others may become chlorotic.

So-called hysterical symptoms exhibited at this period of life include abnormal eating, fasting, capricious appetite, pica, barking cough, and stuttering. Excessive dreaming and sleep walking are not uncommon. Migraine occurs in girls. Sometimes there are troublesome disorders of menstruation. Menorrhagia may occur at puberty, rarely at the first period. It may cause profound anæmia, and has been known to prove fatal. It should be treated with calcium lactate for three days twice a month, drachm doses of ergot for the bleeding, and bromides. Irregularity at the onset is quite common and unimportant. It must not be forgotten that an imperforate hymen or other malformation may not give evidence of its presence until the onset of the catamenia.

Mental and nervous disorders are common in the form of emotional disturbances, hysteria, hysterical fits, and less frequent as religious melancholy, hallucinations, ecstasy, trances, preaching mania, suicidal tendencies, horror of death, hystero-epilepsy, a proclivity to epilepsy, delusions, malingering, neurasthenia, and sexual psychoses. Hysteria is often due to a sexual shock which is brooded over in secret, and can be cured by talking about it. All these symptoms are more likely to develop in defectives, but normal children may first be found defective at puberty and unable to profit by teaching. General perturbations, the result of erotic excitement, may become dangerous at this age, and make it necessary to send previously harmless imbeciles to asylums. Vicious habits may be unduly developed by bad companions, imitation, and insufficient supervision in the organisation of school life. Excess depends greatly on inherited instability of the nervous system. The normal psychic features of puberty are most interesting to watch. The birth of imagination leads to reverie, inner absorption, musing, brooding, and even illusions. The vivid ideas appear as realities to some imaginative children. The critical faculty is defective, yet there arise a consciousness of self, oversensitiveness, and self-criticism. This again leads to over-assertion of the individuality and the bumptiousness of youth. The vocabulary is enlarged and words have a more definite meaning. It is the age of imitation, of folly, of dramatic roles and poses. Fortunate is the child who is under judicious guidance, for the future may be made or marred.

MEDICO-LEGAL POINTS.

PREGNANCY FROM A LEGAL STANDPOINT—IV.

INFANTICIDE (*concluded*).

THE essential question to be decided by the medical evidence in a case of alleged infanticide is the cause of death. Male children are more liable to die during labour than females, owing to the somewhat larger size of the former, and the greater difficulty of birth. So, too, children die in larger numbers in first than in subsequent labours of the mother: the proportion being one to eleven in the former, and one to thirty-one in the latter. These facts must be taken into account in estimating the probability of death from natural causes. The fœtus may die *in utero* or shortly after birth in consequence of malformations, asphyxia, operation or accidental violence, or from fœtal or maternal disease.

NATURAL AND ACCIDENTAL CAUSES OF DEATH.

The medical jurist must be familiar with the many natural and accidental causes of death to which the infant is exposed during birth. The following are amongst the most frequent of these: (1) compression of the umbilical cord before normal respiration is established, if it is not remedied at once, frequently results in the death of the child; (2) suffocation or strangulation may occur from the cord getting round the child's neck—a position of the cord which is found in about one in four deliveries; it may leave a groove or mark suspiciously suggestive of strangulation with a string, but the skin of the neck is not abraded as it most probably would be by a string; (3) in a very protracted labour the child may die from exhaustion or from pressure of the uterus or maternal passages; the child may even exhibit injuries suggestive of violence from the powerful character of the uterine contractions; (4) hæmorrhage from the cord may occasionally be fatal, especially if it has been cut with a sharp instrument and imperfectly ligatured; (5) fractures of the cranial bones are very rare, but are occasionally caused by the use of instruments, or by some abnormal obstructions to delivery; (6) the child may be accidentally asphyxiated owing to the mother being suddenly and unexpectedly delivered while on the seat of a water-closet, and the child being precipitated head down into the pan, where, if it is allowed to remain, it is quickly drowned or suffocated.

A QUESTION OF PROBABILITIES.

The last of these natural causes of death is one of the commonest explanations given by the mother, with the addition that she fainted away before she could place the child in safety. In the vast majority of such cases the story is a pure fabrication, but there is no doubt that such rapid delivery has taken place, and has been followed by immediate unconsciousness. The question as to whether the child was accidentally born into the water-closet or was intentionally put there may not be so easy to determine. In the first place, the

possibility of the occurrence must be considered. Tardieu (p. 166) considers it scarcely possible for the woman to remain seated during the entire delivery. Either she must be squatting, or she would have to straighten out in order to keep the infant from striking the border of the hole. If she straightened out the infant would be born on the floor, and not in the closet trap, while if the woman was squatting, the child might be born into the closet. Hence, before admitting the possibility of the accident, the exact position of the woman and the arrangements of the closet should be taken into consideration. Again, for such an accident to occur the labour must have progressed much more rapidly than usual, and at a rate that is very exceptional in primiparæ, in whom infanticides are not infrequent. Moreover, for the infant to fall beyond recovery, either the placenta must be born immediately after the child, a very infrequent occurrence, or the cord must be ruptured, which is more likely. In the latter case the end of the cord gives evidence that at least it was not cut, by its irregular end, and the retraction of the blood-vessels, as distinguished from the even end, and comparatively prominent vessels of the cut cord. A child that is immature or badly nourished *in utero* may die from very slight causes which would not affect an ordinarily robust child.

METHODS OF SUFFOCATION.

Suffocation of the infant may be produced in various ways similar to those in the adult, and also in several ways characteristic of the new-born infant, who can offer no resistance. The face of the infant may be covered with a cloth, pillow, or mattress, none of which will leave any characteristic mark. Or the infant may be buried alive; when, if the dirt has free access to the mouth and nose, it may be inspired and found in the mouth, pharynx and larynx. The infant may be suffocated by being put in a bureau drawer or in a box, where the asphyxia will follow gradually, and where the signs will also not be characteristic. Similarly, the child's thorax and abdomen may be compressed either with the hands, or by leaving the infant as it is born, between the thighs of the mother, and compressing it there with her thighs. Here, too, the evidence as to the manner in which the suffocation was produced is rarely distinctive.

Perhaps the most usual way for the mother to suffocate the child is to cover the nose and mouth with her hand in her attempt to keep it from crying and so betraying its birth. If the woman succeeds in stopping the cries, she also kills the child. In these cases the signs of the method used are often distinct. There are the marks of the finger-nails of the mother on the face of the child, around the nose and cheeks. These lacerations of the skin are especially likely to occur, as the skin of the child is so slippery from the vernix caseosa, and it is necessary to hold the child fast for five or six

minutes to end its attempts at respiration. Owing to the difficulty of holding the child's head, the suffocation is not uncommonly supplemented by strangulation, the mother's hand readily grasping the infant's neck. Here the nail marks are found also on the neck.

To these arguments from the nail marks the mother not infrequently makes the response that the marks are the result of the attempt to help herself in the delivery after the birth of the head by grasping the head with her hands and pulling on it. Such a defence may be admitted if the nail marks are transverse on the neck, but not if they lie in its long axis, as is usually the condition.

OTHER METHODS OF INFANTICIDE.

Burial alive may occur, but more often the body of the child is buried after death, or in a condition of suspended animation at the time of birth. The signs of live burial would be those of suffocation in general, and in addition the presence of the powdered earth in the pharynx and larynx. Bro-mardel (p. 85) considers that a child may live several hours (four or five) after burial. Hofmann ("Gericht. Med.," p. 800) cites two cases from Bohm, of infants buried just after birth that were dug up alive after having been buried under 25 cms. of earth for eight hours; and still another from Mascha, where the infant was dug up alive after having been under a foot of earth for five hours. Here also may be mentioned the cases of suffocation by exposing the child to noxious vapours, as those of burning charcoal, or sulphur, the exhalations of privies, etc., of which no trace will be found except the odour of the deleterious gases.

Exposure of the child to cold is too slow a method of infanticide for ordinary uses, though, if the exposure is carried only to the point where the child catches bronchitis, and the bronchitis leads to the child's death, then lack of proper care is the indirect cause of death, but leaves no convicting evidence behind. The time that a child can live when abandoned is not definitely settled. If a child is deprived of all nutrition it loses about one hundred grams a day by inanition. Usually at the end of about one week, or when its weight has been reduced to 2,100 grams, it dies. Usually the child is given scant or inappropriate nourishment, and lives a few weeks, leaving no evidence of crime.

LIVE BIRTH AND DEATH BY VIOLENCE.

It is a fundamental principle laid down by Henke that death by violence is by no means to be inferred from the fact that the child was born alive. Even when marks of death by violence exist, it does not follow that the child was murdered. In the former case it may have perished in consequence of some disease incompatible with its life, or have been suffocated by the caul upon its face, or by its lying in a pool of blood and water, or under a limb of the mother while in a state of exhaustion or unconsciousness; or in consequence of there being no help at hand, or of the unwillingness of the mother to betray her condition, the child may be suffocated, or may perish from exposure to cold,

etc. While, says Caspar, we refuse to be imposed upon by the "impudent lies" which women do not hesitate to tell to conceal their guilt, we should not forget that the dangers to new-born children are very numerous, and that, without any criminal intent upon the mother's part, the child may perish from any of the causes just mentioned, from an injury to the head, from constriction of the umbilical cord, or hæmorrhage following its rupture, or from falling into a privy, etc.

Even apparent marks of violence must be cautiously interpreted. It must not be forgotten that many marks of accidental injury are with difficulty to be distinguished from such as are feloniously inflicted. Care should be taken not to confound these with marks which may have been made after death in recovering the body from cess-pools and similar places, or which are merely signs of the voracity of fishes, hogs, rats, etc.

In short, the duty of the medical jurist, called upon to investigate cases like those under consideration, should be to preserve the strictest impartiality, to avoid being biassed by his sympathy with the misfortunes of the accused, upon the one hand, or, on the other, by the abhorrence of her imputed crime, and to endeavour to give its just weight, and no more, to every circumstance which the investigation brings to light.

Among other points, it will be necessary to examine the dimensions of the pelvis of the woman, since this examination may throw some light upon the truth of a defence as to rapid or protracted delivery. Unless an examination of the woman is made within twelve or fifteen days after delivery, no satisfactory evidence can in general be obtained.

If the reputed mother is dead, an order may issue for a post-mortem examination of her body, and the case will present no difficulty; if living, a question may arise as to medical responsibility.

REFUSAL OF PHYSICAL EXAMINATION.

It may happen that the woman refuses to submit to a physical examination. An innocent woman is just as likely to refuse permission as one who is guilty; but, if circumstances point to one out of several women in a household, the refusal to permit an examination would of course be interpreted against her. It is only when a woman willingly consents to be examined that a medical man is justified in making an examination. It would, however, be proper in such a case to give her the warning which every magistrate and coroner is bound to give to any woman charged with murder, before requiring an answer to a question which may be used in evidence against her at the subsequent trial.

If a medical man compels a suspected woman, unwillingly, or under duress, to submit to a physical examination, he is forcibly compelling a woman accused of murder to produce positive proof of her guilt. There is no statute which authorises such a proceeding. Any coroner issuing such an order to a medical man would be acting *ultra vires*, and any medical man obeying it would render himself liable to damages.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

ASTHMA AND ITS TREATMENT.

By CHARLES J. WHITBY, M.D. Cantab.

NOTEWORTHY among the wise saws which most of us imbibed in our student days is one to the effect that asthma is "not a disease but a symptom." It is neither more nor less true than would be the statement that epilepsy, migraine, or any other of the paroxysmal neuroses is a "symptom." Asthma may of course be a symptom: I remember a well-marked case which was cured by the removal of nasal polypi, and no doubt this is common enough. But true asthma is as definite a pathological entity as cancer or chicken-pox. It has fallen to my lot to see a good many cases of this terrible malady—for terrible it often can be—and I have been struck by the fact that many of these have escaped recognition by the doctors who had previously seen them. Has this been a result of the fallacious teaching referred to above, I wonder? There is distinct evidence that true asthma is commonly of hereditary origin, the worst cases being those in which the disease declares itself in childhood and continues throughout life. The least disturbance of the ordinary routine of life, in regard to climate, diet, or exertion, will in such cases inevitably precipitate an attack, by which, for a week or fortnight, the patient will be absolutely incapacitated. Life may become a burden, and, failing relief or even recognition of their malady from the profession, such patients fall ready victims to the omnipresent quack and his vaunted specifics.

As to the pathology of the condition, the fundamental fact about asthmatics, who come as a rule of neurotic or otherwise impaired stock, is a congenital hyperæsthesia of the skin and mucous membranes, resulting in a tendency to reflex vasomotor and visceral disturbances. Asthmatics are peculiarly sensitive to smells: not only to bad smells, for even perfumes, which to others are delightful, often cause more or less dyspnoea. Frequently they suffer from hay-fever in the summer months. From the loud dry wheezing audible during both inspiration and expiration all over the chest, I infer a general spasmodic contraction of the bronchioles. Associated with this there is probably considerable engorgement of the mucosa and submucosa, as the attack invariably terminates in hypersecretion of mucus. The reality of the obstruction, felt more especially with regard to expiration, is proved by the fact that subcutaneous emphysema may (as in whooping-cough) be thereby induced. I once attended a young man who, in the course of a violent attack developed pronounced emphysema of the trunk, neck, and face. So far as my observations go, the arterial blood-pressure would seem to be invariably high during an attack of asthma, averaging perhaps 180 to 200 mm., the result, mainly, of spasm of the cutaneous arterioles. One must not, of course, overlook the probability of a toxæmic element in the production of asthma, so-called gouty asthma being an evident case in point.

Of the preventive treatment, the most important

factor is the choice of a suitable climate. In my experience most asthmatic subjects have seemed to require a climate at once fairly bracing, yet sheltered from cold winds. Seaside places are only suitable during the summer months, and only then such comparatively mild resorts as Bournemouth, Dawlish, Weymouth, Sidmouth, etc. Places near the coast, yet sheltered from the direct inland winds by a range of hills (e.g. by the South Downs), are often found beneficial. And of course it is proverbial that many asthmatics are comparatively well in London. Perhaps the sulphurous contamination of the atmosphere has a medicinal effect! In regard to climate, and all else indeed, idiosyncrasy counts for much. I have heard of a husband and wife compelled by asthma to live respectively at the top and bottom of a hill.

It is of the first importance for these unfortunates to make a careful study of diet: an attack of dyspepsia is invariably the precursor of their enemy's appearance. They should, in most cases, avoid pastry and cheese, pork, pickles, all highly-pungent condiments—in fact everything of a chemically or mechanically irritant nature, and they should avoid every kind of excess. In the matter of apparel, asthmatics largely affect thick woollen underwear; "chest-protectors" are also a favourite vanity of their kind. Such things aggravate the cutaneous hyperæsthesia; they should be replaced by cellular material or by cotton combination garments. A woollen shirt may be necessary in cold weather, but it should not be worn next the skin. As supplementary hardening agents, a morning cool sponge bath or a graduated rose-douche, cold sponging of the chest, paddling, barefoot walking, and "air baths" may be recommended.

Systematic breathing exercises are of great utility as a preventive of asthma, sufferers from which are as a rule bad breathers. Debilitated patients may take them sitting or recumbent: stronger individuals should be taught a few carefully-considered exercises adapted for chest-expansion, and instructed to go through these a certain number of times after the morning bath. Directions cannot be too precise: vague recommendations of "exercises" without specific details are useless.

The first question one asks oneself when called to a patient in the throes of a bad attack of asthma is apt to be "Does he (or she) require an injection of morphine?" It is a question which, when in doubt, one should answer in the negative. Temporary relief can almost certainly be given, but one has to remember that one is dealing with a condition which may recur many a time. The patient will not forget the relief once obtained by morphine, and the temptation to demand a repetition will be overwhelming. On the other hand, alarming as the symptoms of a really bad attack may well appear to the novice, one knows that danger is practically

nil, and one may generally hope to give relief by less questionable means. Still, in a small minority of cases, and in exceptionally severe attacks, an occasional injection of morphine and atropine is, I believe, good treatment. A patient may be so exhausted as hardly to realise what is being done to him. From first to last, during a genuine attack, the patient should be kept in bed in a warm but well-ventilated room. Until free expectoration has begun (the almost invariable precursor of recovery), the least exertion will certainly aggravate whatever amount of dyspnoea may exist. With regard to dietary—patients going through a bout of genuine asthma have an instinctive loathing for food. Digestion is in abeyance, for the vital powers are concentrated on the mere labour of respiration. The less food taken, the sooner, I believe, will the attack be over. An occasional cup of "Benger's" made partly with water, varied once or twice in the 24 hours by a cup of weak "invalid" (i.e. unseasoned) "Bovril," is as much as can be

assimilated. Some relief often follows immersion of the hands and forearms for 10 to 15 minutes in very hot water. A foot-bath may be given simultaneously if the patient can be got out of bed.

Finally, as to drug-treatment: the main indications are (1) reduction of blood-pressure, if excessive, (2) promotion of expectoration, and (3) mitigation by sedatives of the spasm of the bronchioles. One or more of these desiderata is fulfilled by each of the following, all of which I have found helpful, alone or in combination: iodide of potassium (or any of the modern iodine preparations), bicarbonate of potassium, sodium nitrite, spirit of nitrous ether, vinum antimoniale, ethereal tincture of lobelia, fluid extract of hyoscyamus, fluid extract of valerian, morphine, heroin, codeine. When, as often, pungent or nauseous mixtures disagree, small hourly doses of lobelia or of antimony may cut short the attack. The inhalation of the fumes of powders containing stramonium, etc., is a useful palliative, but has no curative effect.

TROPICAL DISEASES.

WEST COAST BOILS DUE TO TUMBU-FLY LARVÆ.

Boils and sores of various sorts are of widespread occurrence in the tropics, and their cause varies considerably with the locality. On the West Coast of Tropical Africa, particularly in Sierra Leone, there is a disease of which the lesions are so like furunculosis that they are apt to be mistaken both by patients and practitioners for ordinary boils, though they are really due to the presence in the subcutaneous tissues of the larvæ of the Tumbu fly. A good account of the disease is given by Major Blenkinsop, R.A.M.C., in the *Journal of the R.A.M.C.* (1908, p. 16).

In the majority of cases only a single larva is found in an individual at one time, though as many as fifteen and even twenty-four have occasionally been recorded. In Europeans the upper parts of the thigh and the buttock are the favourite sites for the larvæ, and it is generally held that the parasites are often acquired at the latrine. Other parts than the thigh and buttock may be affected, however, the forearm, for example, or such other exposed regions. Major Blenkinsop records one case in which the patient, a European, was in the habit of lying on his bed in an almost nude condition during the heat of the day, with the result that the characteristic sores appeared simultaneously on the chest, back, and legs. Among the partly clothed natives of Sierra Leone the site of the lesion may be very varied.

Each place takes from ten days to a fortnight to attain full development. During the earlier stages there is so little inconvenience that the patient's notice is not attracted to it, and consequently the actual history given is usually shorter than ten days. Though extremely painful sometimes, the sores do not incapacitate a man for work unless they affect the axilla or excite secondary inflammation of lymphatic vessels and lymphatic glands. When developed, a small central area

apparently of suppuration is to be seen surrounded by an areola of inflammation from three-quarters of an inch to an inch in diameter. On careful examination of the central area some black matter, the excrement of the larva, may be seen immediately beneath the skin, and in the centre a minute breathing aperture. If the latter is very gently pressed with the tip of the finger intense pain is caused, very possibly on account of movements of the larva. In some cases in which secondary pyococcal infection occurs an abscess is produced.

In ordinary cases the pain, though severe, is paroxysmal, and the intense continuous throbbing of the large furuncles is absent. If allowed to run its course, the larva leaves its nidus spontaneously when fully developed. It does not burrow deeper than the subcutaneous tissues.

The following are the points upon which Major Blenkinsop lays particular stress in differentiating the sores of Tumbu fly disease from boils: (1) The presence of the black excrement around the larva's breathing aperture; (2) the pain caused by gentle and continuous pressure on the breathing aperture; (3) the paroxysmal character of the pain, which is generally unaccompanied by throbbing.

The larva can usually be removed entire with the point of a surgical needle. If uninjured, it is very active for some time after its removal. The small wound heals rapidly if washed out with some antiseptic lotion, such as carbolic acid 1 in 20 and then covered with an antiseptic dressing. A small depressed and more or less pigmented scar results. A free incision may be required to let out pus.

In one case under Major Blenkinsop's care, in which there were several larvæ present at the same time, the patient had applied a plaster of sugar and soap to some of the sores, and the larvæ appeared on the surface in less than twelve hours in every case he had thus treated.

THERAPEUTICS AND PHARMACY.

ORGANIC COMPOUNDS OF ARSENIC.

THE limitations to the administration of inorganic preparations of arsenic are considerable owing to intolerance of the drug when the dose is pushed. Even when the pharmacopœial dosage has not been exceeded severe toxic symptoms have sometimes resulted from the administration of liquor arsenicalis, notably in cases of chorea. It is of interest, therefore, to know that arsenic can be given in relatively enormous doses when it is in certain organic combinations discovered in connection with the treatment of sleeping sickness. The drugs so discovered are beginning to be used in other maladies for which arsenic in considerable doses is indicated, notably in pernicious anæmia, leucocythæmia, syphilitic cachexia, and certain skin diseases. The drugs in question are sodium aminarsonate and acetarsonate—the first often sold as Atoxyl and as Soamin, the second as Arsacetin (John Humphrey, *Pharmaceutical Journal*, January, 1909).

SODIUM AMINARSONATE.

Sodium aminarsonate is an extremely stable compound, described by Fournau as the monosodic salt of the anilide of ortho-arsenic acid. As a proprietary product, its trade name is Atoxyl. Neither arsenic nor aniline can be separated from it easily by chemical means. Its aqueous solutions, however, are less stable, pure aniline having been found to be present in solutions that have been exposed to the light for a few days. Boiling decomposes the solutions with liberation of arsenic acid. Atoxyl contains 24 per cent. of arsenium, and yet it is only about one-fortieth as toxic as arsenious acid. This applies to atoxyl itself, of course, and not to an aqueous solution after boiling with liberation of poisonous arsenic acid.

The drug was first employed for anæmia and skin diseases. Then Koch recommended it for the treatment of sleeping sickness. The effect of atoxyl on protozoal infections having been thus demonstrated it was also tried in syphilis, though not with invariable success. Various toxic effects have resulted from big doses, *e.g.* vomiting, diarrhoea, albuminuria, interference with vision, deafness, giddiness, faintness, colic, and weakness of the limbs presumably due to neuritis.

Soamin was introduced as para-aminophenyl arsenate, and was said to differ from atoxyl in the amount of water of crystallisation. It would appear, however, that there is no actual difference in the composition of these two preparations. Soamin has only one-fortieth the toxicity of arsenious acid, and is soluble in about five parts of water.

SODIUM ACETARSONATE.

Sodium acetarsonate (proprietary name, Arsacetin) was discovered by Ehrlich, and appears to possess distinct advantages over sodium aminarsonate. The toxic by-effects of atoxyl proving

a hindrance to the further development of the therapy of sleeping sickness, syphilis, and so forth, it became important to find a modification of this organic compound of arsenic, which should be less toxic and yet as potent therapeutically. Acetylarsanilate was synthesised by the introduction of an acetyl radicle into the amino group in atoxyl. This compound is free from arsenious and arsenic acids. It is stated to be at least three times less toxic than sodium aminarsonate—whether this be really so or not time will show. We should like it to be understood that we are merely stating what sodium acetarsonate is, without holding any brief in its favour. It is not impossible that in due course it may be found to have effects which detract from its value, and yet another and perhaps a better organic compound of arsenic may be devised. It seems important, meanwhile, however, to understand what the nature of the drug is.

In contrast with sodium aminarsonate, solutions of which seem to be decomposed by boiling, it is stated that solutions of sodium acetarsonate withstand not only boiling, but even heating up to 130° C. for an hour in an autoclave without decomposing. The importance of this from the point of view of sterilisation for injection purposes is obvious; moreover it obviates the necessity for making up fresh solutions daily.

Neisser (*Deutsche Med. Wochenschrift*, No. 35, 1908) is quoted by Mr. Humphrey (*loc. cit.*); he tried arsacetin extensively both on animals and human beings, and reports:—

(1) That the preparation is certainly far less toxic than atoxyl or soamin, both healthy and diseased animals tolerating very much larger doses of arsacetin than of atoxyl; (2) that as far as it is possible to make any comparison as to the remedial action on syphilis the results are in favour of arsacetin; (3) that no decomposition of any kind could be detected in the solution, even when it had been stored for a long time; (4) that boiling daily does not seem to alter the solution.

It must not be forgotten that the results obtained with these drugs in the treatment of syphilis are so far extremely disappointing; nor has any case of sleeping sickness been definitely cured by them, though some improvement is often obtained.

The Bacteriology of Plasters.

With the object of ascertaining the relative sterility of spread plasters and protective dressings, G. Pinchbeck has conducted a long series of experiments. He communicated the result of his observations to the members of the British Pharmaceutical Conference. He finds that all plasters, unless sterilised, are septic, and that the degree of sterility is diminished by atmospheric pressure. Under these circumstances some effective method of rendering plasters and protective issues sterile is greatly to be desired.

MOTURING NOTES.

EXPENSES OF MOTOR UPKEEP.—II.

In my last article under this heading (page 671, March 27, 1909) I drew attention to the most important points having a direct bearing on the expense of keeping a motor-car, but there still remain one or two matters worthy of consideration in this connection. Some owners keep the same car for years, whilst there are others who are not satisfied with anything unless it be of the latest pattern and design, and who consequently make it a rule to have a new car every year. There are not, I imagine, many medical men who fall into the latter category, yet there are many who make frequent changes. I think I may say that the principal item of expense in regard to keeping a car is the depreciation in selling value, and the owner who frequently purchases a new car must be prepared to lose in this way proportionately more than the owner who, having a good car, keeps it for several years. Cars of the highest reputation depreciate very much less than others, because their qualities are known and there is a regular demand for them second-hand. Cars of second-rate quality, although their first cost may be considerably less, cause much greater losses, as they have to be resold at a very low figure, owing to the small demand for them.

The selling value does not always represent the actual depreciation from a user's point of view, and, provided the right car is purchased at the beginning and a change is not made, the depreciation is very small indeed. It has been found by actual experience that a really first-class single-cylinder car costing under £250 will, if properly looked after and maintained, easily run over 100,000 miles. Now taking the average motorist's annual mileage at 5,000, this car is capable of 20 years' service, and therefore the annual depreciation will be only £12 10s., or at the rate of 5 per cent. It is, of course, unlikely that anyone would care to run the same car for such a lengthy period as 20 years; yet it could be done, and I give the illustration with a view of proving that, provided a first-class car is purchased and used for several years, depreciation is by no means the "bogy" that some people would lead us to expect.

There is one final point bearing on expense of upkeep I would mention. It is wise to have the engine and car looked over occasionally, so that parts may be renewed as they become worn. Neglect of this causes excessive wear, and extra expenses eventually accrue. Frequently the neglect to replace a part at the cost of a few shillings will result in the wear of other parts which will cost as many pounds to make good.

Although from time to time letters have appeared in the motoring journals from owners giving their expenses for car upkeep for a year, and sometimes for a number of years, these communications refer to cars of different make, size, and power, and are useless to base any estimate on as to the annual cost of running a car suitable for the "man of moderate means," which classification I regret to say, includes the doctor nowadays. Last year, however, the De Dion-Bouton Company, who have con-

sistently catered for the medical profession, and whose small car is, I am sure, the most popular with the profession, having some 508 doctors on their records as owners of De Dion cars, wrote to several asking for particulars of the actual expenses they have incurred in running their cars. The replies they received, being the actual experiences under the normal conditions of doctors' use, are most valuable when summarised both to the actual and prospective medical motorist.

In reproducing them in these columns. I must say that they include all expenses except driver or cleaner, motor-house, and depreciation, which vary according to circumstances. To prevent confusion and increase the value of the analysis as a guide, the single-cylinder only is included in the summary.

Petrol.—The reports show a total mileage of 97,379, and the cost for petrol £263 3s. 6d. Averaging the price paid for petrol at 14d. a gallon, it means a consumption of 4,511 gallons at the rate of 21.617 miles per gallon.

Lubricating Oil and Grease.—In the reports where the expenses for oil and grease are quoted, the mileage amounts to 93,229 and the cost £48 4s. 2d., —0.12d. a mile.

Mechanical Repairs and Replacements.—In the reports where these items are separated from others the mileage totals 97,379 and the cost £124 16s. 3d., —0.3d. a mile.

Tyre Repairs and Replacements.—In the reports where these items are stated the mileage totals 92,879 and the costs £210 15s. 6d.—0.54d. a mile.

Sundry Running Costs.—Running costs not included under the above headings amount to £28 7s. for a mileage of 97,379—0.069d. a mile.

Based on the average of the above analysis, the cost of running a single-cylinder De Dion-Bouton car 5,000 miles, which is about the distance travelled in one year by a doctor, would be:—

Petrol	£13 10 2
Lubricating oil and grease	2 11 8
Mechanical repairs, etc.	6 4 2
Tyre repairs and replacements	11 6 11
Sundries	1 9 1
Carriage and driving licences	2 7 0
Insurance against all risks (up to £300)	8 5 0
	£45 14 0

This sum may be safely taken as a guide as to the expense of running a small car for a year. Possibly, however, the expenses during the first year should prove considerably less, since if tyres of a large section were fitted the cost under this heading should be reduced to a few shillings for repairs of punctures. Some garage proprietors whom I know are prepared, when they sell a car of this type, to find petrol, oil, tyres, keep the car in running order, and insure against all risks for the sum of £35 the first year, £45 the second and third, and £55 the fourth and fifth. When the trade is prepared to do this, the cost of keeping a small car cannot be considered excessive. "VIATOR."

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

SPECIAL HOSPITALS.

WE have lately received an interesting, well-written monograph* by a man who has devoted the best years of his life to the cause of special hospitals. It is not too much to say that the continuous success of the Central London Hospital for Diseases of the Throat, Nose and Ear, in Gray's Inn Road, is largely due to the devotion of the secretary to its interests. The book contains a few interesting plates dealing with ancient medicine, and a reasonably complete chronology of the origin and development of modern special hospitals, in the course of which the names of most of the men who have been instrumental in establishing these institutions find a place. Due tribute is paid to medical women, and their enterprise and influence in the hospital world is recorded. Thanks to Mr. Kershaw's zeal and energy, the Central London Throat and Ear Hospital has been conducted with great efficiency and economy, and has always deserved credit for the care taken by the management to prevent hospital abuse. There is a chapter on special hospitals and their relation to medical education, in the course of which it is shown that 676 medical practitioners visited the eye hospitals, and a similar number the ear and throat hospitals, to witness their practice in 1907, in addition to 294 post-graduate students. Seven hundred and sixty medical practitioners and post-graduates visited the special hospitals for diseases of the skin in the same year with the same object. The number of medical practitioners in the same year who visited the following groups of special hospitals were:—

Hospitals for women	...	...	574
Hospitals for paralysis	...	...	725
Hospitals for children	...	...	420

It is a remarkable fact that 1,383 medical practitioners are stated to have visited St. Peter's Hospital for Stone in 1907. In the whole 5,735 medical visitors and 547 students attended the practice of 22 special hospitals in London in 1907.

There is a chapter on special hospitals in relation to economy, in the course of which Mr. Kershaw contends that if the average cost per patient is taken at all the general hospitals and all the specials, "the economy certainly rests with the latter." Mr. Kershaw states that the average cost of each in-patient per week at 17 general hospitals is £1 17s. 4d., and the average cost of each out-

patient's attendance is 7½d. The average cost of each in-patient per week and of each out-patient's attendance at the following groups of special hospitals is stated to be as follows:—

	Average weekly cost of each in-patient.	Average cost of each out-patient's attendance.
	£ s. d.	d.
Women's Hospitals	... 1 17 9	9½
Women and children	... 1 9 7	6½
Consumption	... 1 10 3½	10½
Ophthalmic hospitals	... 1 3 10	5
Throat and ear hospitals	... 1 14 5½	8½
Paralysis	... 1 13 8	9½
Miscellaneous special hospitals	2 2 9	10

Taking the whole 15 general hospitals and 31 special hospitals, Mr. Kershaw's figures are as follows:—

	General Hospitals.	Special Hospitals.
	£ s. d.	£ s. d.
Average cost of each in-patient per week	... 1 17 4	1 13 0
Average cost of each out-patient's attendance	... 7½	8½

Mr. Kershaw gives the following interesting figures concerning the Central London Throat and Ear Hospital for the year 1908:—Of 10,481 new out-patients and 706 in-patients, 3,067 out-patients and 392 in-patients were sent to the hospital by medical practitioners. The out-patients made 47,406 attendances, of which 29,450 were paid for by the patients' contributions, varying from 6d. to 15s.; 16,205 paid 1s., 7,538 paid 2s., 1,984 contributed 6d., 1,008 1s. 6d., 1,094 3s., 700 4s., 220 5s., 14 10s., and 13 amounts varying from 10s. to 15s. each. Of the remaining attendances 16,296 were absolutely free, and 1,660 were admitted by subscribers' letters. It may be added that the payments extended for periods varying from a week to a month, but the sixpences and shillings represent a week's treatment, whilst the higher payments were for a more lengthened period. Forty per cent. of the out-patients and 60 per cent. of the in-patients at the hospitals for women were recommended by medical practitioners, whilst 29 per cent. of the out-patients and 55 per cent. of the in-patients at the Central London Throat and Ear Hospital were similarly recommended.

The book concludes with a list of the special hospitals founded in the United Kingdom during the nineteenth century, the date of foundation, the names of the founders and statistics of medical and post-graduate visitors, and of the patients sent to each institution by medical practitioners. This monograph is well printed, its contents are interestingly written and well illustrated, whilst the statistics are clearly given.

* "Special Hospitals: their Origin, Development, and Relationship to Medical Education. Their Economic Aspects and Relative Freedom from Abuse." By Richard Kershaw. (London: Geo. Pulman and Sons, Limited, Thayer Street, W.)

THE HOSPITAL SCANDAL AT BOURNEMOUTH.

BOURNEMOUTH presents a lamentable spectacle so far as its hospital arrangements are at present concerned. A local war has been raging for a considerable time between the two hospitals, the Victoria at Bournemouth and the Royal Boscombe, which has produced a grave scandal. The Victoria Hospital situated at Bournemouth is quite two miles away from the Royal Boscombe Hospital and has no ground whatever on which to expand. In our issue of June 16, 1906, p. 198, we did our utmost to prevent competition and secure harmony before any steps were taken to increase the hospital buildings in connection with either of these institutions. All attempts to secure peace failed, however, and the authorities of the Victoria Hospital incurred the grave responsibility of acquiring a site two miles away from their institution but quite close to the Boscombe Hospital and proceeding to erect thereon an out-patient department. The history of hospitals

in this country presents no more lamentable instance of defective judgment in hospital affairs than this action of the Victoria Hospital authorities. The Royal Boscombe Hospital with an adequate site were arranging for the erection of an out-patient department at the time, and they have succeeded in opening this department first. We propose to give the plans of the buildings in due course, but may here mention that we are informed that the out-patient department of the Royal Boscombe Hospital is large enough to contain the whole of the Victoria Hospital buildings with room to spare. The whole proceedings in regard to these out-patient departments is very regrettable, and it remains to be seen whether the inhabitants of the district, who will have to supply the money for doing the work twice over, will mark their sense of the action of those who are to blame, by withholding supplies. In the interests of sound hospital administration it is to be hoped that they will show this measure of intelligence in self-defence.

THE ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.

H.R.H. PRINCESS ALEXANDER OF TECK on Saturday last performed the ceremony of opening the new out-patient department of the Royal Boscombe and West Hants Hospital. H.R.H. the Duchess of Albany had arranged to open the building but was, owing to slight indisposition, unable to undertake the journey, and her place was, at short notice, taken by her daughter. The formal ceremony took place in a marquee before a large assemblage of people; and after having declared the building open the Princess conducted into the new waiting-hall, where she unveiled a tablet in memory of the late President, Sir Frederick Wills, Bart., to whose munificence the hospital owes so much. The Chairman took the

opportunity to announce that Sir Gilbert Wills, the eldest son of the late president, had been nominated to succeed his father in that office. The new out-patient department is a portion of a larger building, which, when completed, will contain the whole of the administrative offices and quarters for the resident medical officers and nursing staff. Separate consulting rooms are provided for the physicians, surgeons, ophthalmic and dental surgeons, and a new dispensary is accessible both for out-patients and for the service of the wards. The new buildings were designed by Messrs. Young and Hall in conjunction with Mr. G. A. Bligh Livesay, of Bournemouth.

GRADUATE STUDY ON THE CONTINENT—RUSSIA.

II.—GRADUATE STUDY IN RUSSIA.

IN the former article we briefly described what the graduate student may derive from a visit to Russia. In this we propose to deal with the facilities the Russian practitioner (and also the foreigner who, understanding Russian, is in a position to avail himself of these facilities) is given for the prosecution of graduate study in private practice. To some of our readers it may be a surprise to hear that in the matter of post-graduate study associations Russia is well in the front rank of European countries. As early as 1875 a movement was originated in St. Petersburg having for its object the promotion of graduate study both in medicine and in dentistry, and Russia may therefore claim to have been one of the first countries to recognise the necessity of such study, and to encourage it by giving the general practitioner opportunities for indulging in it. The first definite step towards initiating this movement was made by a special committee composed of the leaders of the medical profession in Russia, private practitioners, and lay friends who lent their support, both sympathetic and financial, to the movement. Among these lay friends the names of several members of the reigning house, and especially of the Grand Duchess Helene Pawlovna, figured prominently. Under their patronage was built and endowed what was probably the first post-graduate study institution in Europe,

the fine Imperial Clinical "Helene Pawlovna Institute" at St. Petersburg. This institution, designed as a centre for post-graduate instruction, was founded in 1875, and built out of a fund of 80,000 roubles collected from private sources, to which, by command of the Czar Alexander II., a State contribution, amounting to 40,000 roubles annually, was added. In May, 1885, the Institute, erected at a total cost of 500,000 roubles, was formally opened. The original site was granted to the committee by the Ministry for War, and from private sources a sum of 150,000 roubles was contributed as the nucleus of a permanent endowment fund. Since 1885 this fine institution has gradually been enlarged and improved, the last addition, a building devoted to pathological anatomy, being completed in 1905. At present the Institute comprises seven large quadrangular buildings and three wooden pavilions, which serve as clinical wards for special cases. There are departments for pure medicine, midwifery, surgery, pathological anatomy, and bacteriology, and out-patient departments for the other specialities, which include special clinics for dermatology, syphilology, genito-urinary diseases, ophthalmology, otology, laryngology, rhinology, and psychiatry. At the head of each department is a special demonstrator, who has the rank and receives the stipend (3,000 roubles) of an ordinary University professor,

and is required to give at least three free demonstrations or lectures weekly. In addition, the teaching staff comprises eight honorary or consulting professors and two demonstrators who receive no salary, but who are allowed to give private courses, for which a small fee is charged. Practitioners may attend all clinical lectures, demonstrations, and practical courses on payment of a half-yearly subscription of ten roubles; from this source the Institute derives a yearly income of 3,000 roubles. Patients attending the clinics are charged a small fee; for Röntgen-ray work done on behalf of private patients a fee is also charged. In addition the Institute receives a yearly grant from the Government, and a sum accrues annually from the interest on the permanent endowment fund, while there are usually private subscribers. The Institute is open all the year round, with the exception of a summer vacation from May 15 to September 1. Most of the practitioners, who attend from all parts of Russia, usually take a very active share in the work. Thus we are informed that in many cases the activity of the students is so great that the practical courses last till 11 o'clock at night in some instances. Courses are given in all subjects, usually according to the demand of the students, and practical courses are limited to ten members. It is intended to enlarge the Institute considerably, as the out-patient departments are usually overcrowded, both the number of patients and the number of students attending being larger than the present accommodation can cope with. An interesting fact is that 40 per cent. of the students are country practitioners who regularly come to the city to take part in these courses. In many cases even the small subscription asked is not taken, the Director having the privilege of admitting practitioners who cannot pay this amount as free guest auditors. About 4 per cent. of students take advantage of this proviso. No examinations are held or diplomas granted, but an exception to this is made in the case of municipal officers, who are granted a period of leave of absence, with full salary, to attend the courses, and who desire a certificate showing that they have spent their leave in attending the clinics. A feature of the institution is the *colloquium*, or general discussion, on some special case or subject, in which practitioners are invited to bring forward their views, criticise opinions, and generally discuss the matter by means of question and answer.

In addition to this fine and highly successful institution (for the particulars of which we are indebted to the report of the Director, Dr. Tilling, courteously placed at our disposal by Professor R. Kutner, of Berlin) there is at St. Petersburg another special institution devoted to post-graduate study. This is the

IMPERIAL CLINICAL GYNÆCOLOGICAL INSTITUTE, at which regular and periodical post-graduate courses are given. Practitioners have the privilege of working in the Institute, assisting at operations, participating in the practical courses, and attending the theoretical demonstrations and lectures. The hospital itself, situate on the Wassiljewsky-Ostrow, is one of the oldest in the city, dating back to the eighteenth century; but the new buildings are entirely modern, and at present the Institute is unrivalled as a gynæcological hospital. The lecture room, wards, operating room, delivery ward, museum, library, electric light, x-ray room, hydro-therapeutic department, and the laboratories are arranged and equipped in the most modern fashion and on the best principles, and the whole has cost more than £300,000. The courses are given in Russian, but many of the professors speak German and English, and it is possible that the English graduate may find opportunities and facilities for work here. The large amount of clinical material and the excellence of the institution certainly make it one of the most interesting hospitals in Northern

Europe. A large number of practitioners avail themselves of the unrivalled opportunities for post-graduate work offered here. The staff is large and the teaching excellent, and a feature of the institution is that it affords the graduate so much chance for perfecting his practical knowledge by actual practical work in midwifery.

A somewhat similar though hardly so fine or so well-equipped institution exists at Moscow. This is the

GYNÆCOLOGICAL INSTITUTE FOR PRACTISING PHYSICIANS, an institution entirely devoted to the interests of the qualified man in general practice. This fine hospital owes its existence in the first instance to the munificence of a layman, M. Schelaputin, of Moscow, who offered to build and endow a hospital in which practising physicians would have opportunities for perfecting themselves in the practice of midwifery. The offer was gladly accepted by Professor Snegireff, one of the best-known Russian gynæcologists, and in 1896 the hospital was formally opened. It accommodates close upon forty patients, and comprises sixteen small wards, three fine operating rooms and accessories. Regular courses are given here, the number of participants in each course, which is essentially practical, being, for obvious purposes, strictly limited. These courses are, of course, entirely devoted to gynæcological subjects, but they deal with all questions connected with this speciality. Thus, to take the last series of courses, the programme comprised the following:—Anatomy of the female genital organs and of the pelvis; diagnosis of abdominal and pelvic tumours; gynæcological massage; gynæcological electro-therapeutics; operative gynæcology with operations on the cadaver; the nursing of gynæcological patients; after-treatment; difficult labour; abortion; midwifery course, with practical operations; pathological course, microscopic and macroscopic. These courses are very popular, and the list is always full, far more practitioners applying than can possibly be allowed to participate.

At Warsaw, Kiev, and Odessa, and also at Helsingfors, courses are from time to time given for the benefit of practising physicians. The large amount of valuable clinical material available at the fine hospitals possessed by the first-mentioned three cities makes these courses, which are well attended, exceedingly valuable. Furthermore, the Russian practitioner is well catered for by the special courses given at German and Austrian centres, practically just over the border. Among these may be mentioned the courses given in the northern German centres, such as Rostock, Kiel, and Königsberg, and in the more southern university towns, Breslau and Cracow.

In conclusion it may be added that it is proposed to establish at Moscow a large "Institute for Social Hygiene" in which practical courses may be given with the object of instructing practitioners, and under certain conditions laymen whose work brings them into contact with the public, on all questions affecting the health of the community. The scheme has not been fully worked out, and details are therefore not yet available; but the proposal has the support of the whole profession in Russia, which, through the Pirogoff Medical Association, has initiated the movement. It is pointed out that graduate study has a decided interest for the community. The better the doctor is equipped with practical knowledge the better is he able to work for the public welfare. To a large extent hygienic conditions in the smaller Russian towns leave much to be desired, and such an institution will undoubtedly be able to ameliorate the existing condition of things.

Enough has been said to show that graduate study in Russia is by no means neglected. It is true the foreign graduate will not be attracted, at present at least, to that country, as he is towards Germany, France, or Austria, but for the local practitioner the opportunities and facilities offered by the existing institutions are so great and so excellent that the English practitioner may well envy his Russian colleague.

NEWS AND COMING EVENTS.

VISCOUNT CLIFDEN, Deputy Chairman of the Appeal Committee of the Mount Vernon Hospital for Consumption and Diseases of the Chest, will preside at a festival dinner at the Hôtel Cecil on Thursday, May 13, in aid of this hospital's appeal for £10,000 to carry on its work.

THE DUKE OF DEVONSHIRE has been unanimously elected President of the West End Hospital for Nervous Diseases, in succession to the late Lord Egerton of Tatton, and Mr. H. C. Willock-Pollen has been elected Vice-Chairman in the place of the late Mr. A. W. Elam.

At the annual graduation ceremonial at the University of St. Andrews, which took place on March 31, the honorary degree of LL.D. was conferred upon Dr. James Wallace, D.Sc., M.D., F.R.S., Professor of Chemistry in the University of Edinburgh.

It was officially stated in Paris on April 2 that there were then ninety-two cases of cerebro-spinal meningitis in that city and its suburbs. The patients are being treated with the serum associated with the name of Dr. Wasserman of the Koch Institute in Berlin, which has for some time been successfully used in the French military hospitals.

THE Radcliffe prize for 1909 in the University of Oxford has been awarded by the Master and Fellows of University College, upon the report of the examiners, to Dr. Arthur Frederick Hertz, formerly Demy of Magdalen College. The subject of Dr. Hertz's dissertation was "The Physiology and Pathology of the Movement of the Intestines."

MR. CHARLES ERNEST BAKER, M.B., F.R.C.S. Eng., died suddenly last week at the age of forty-four at his residence in South Kensington. At an inquest the cause of death was stated to be heart failure from an overdose of veronal, and a verdict of death by misadventure was returned. Mr. Baker obtained a first class in the Natural Science Tripos at Cambridge, and in 1886 the M.B. and B.C. degrees, and he obtained the F.R.C.S. in 1893. He had been a house surgeon at St. Bartholomew's Hospital and at the East London Hospital for Children, and a resident medical officer at the Royal Free Hospital.

THE DUKE OF ABERCORN, accompanied by the Duchess, presided at the annual meeting of the West London Hospital on March 31. Among those present were the Bishop of London, the Mayor of Hammersmith, and the High Master of St. Paul's School. The annual report stated that the in-patients in 1908 numbered 2,273 and the out-patients 38,297. The Chairman announced that Lady Berghie had promised to endow a cot with £525. He expressed the great regret shared by all at the death of Lord Glenesk, who was a vice-president and chairman of the hospital.

SIR WILLIAM ALLCHIN was on March 31 presented with his portrait in oils at Westminster Hospital. The presentation was made by Sir John Wolfe Barry, chairman of the House Committee of the hospital, who referred to the service which Sir William Allchin had rendered to the medical profession in general and to the Westminster Hospital in particular. The portrait is the work of Sir Luke Fildes, and is a fitting souvenir of the high respect and affection which Sir William has so long inspired amongst all sections of those in any way connected with the Westminster Hospital.

DR. SQUIRE SPRIGGE, who has been chief of the editorial staff of *The Lancet* for the past fifteen years, has been formally appointed editor of that paper, in succession to the late Mr. Thomas Wakley.

PRINCESS CHRISTIAN visited Purley on March 31 in order to open a Cottage Hospital built by subscriptions raised in the district. The High Sheriff of Surrey (Sir Frederick T. Edridge) welcomed her Royal Highness on behalf of the committee. He pointed out that provision had been made for future additions to the building, and that the sum still needed to meet the cost was £500. After a short service, conducted by the Vicar of Purley, purses were received by Princess Christian, and her Royal Highness opened the hospital with a key presented by the hon. architect, Mr. J. Newton.

THE Lady Mayoress presided on the afternoon of March 31 at a drawing-room meeting at the Mansion House in connection with the Royal Institute of Public Health, for the purpose of calling attention to the need of hygiene in the home. It was announced that Her Majesty the Queen and Her Royal Highness the Princess of Wales had consented to become patronesses and vice-patronesses respectively of the Ladies' Committee in course of formation. Professor W. R. Smith, President of the Institute, having explained the scope of its work, Sir John Cockburn moved, and Professor Sims Woodhead seconded, a resolution in which the meeting recorded its approval of the action of the Institute in promoting classes in domestic economy for the instruction of those visiting the homes of the poor.

At the London Hospital on April 1, Mr. Wynne Baxter held an inquest on the body of Mr. Angus Bewley Wilson, M.B. Cantab., whose death occurred there on Wednesday last. Mr. Wilson was attending a woman who was suffering from suicidal laudanum poisoning, and in her struggles she bit his finger. Blood poisoning ensued, and death occurred within a week of the injury. Mr. Wilson was thirty-two years of age and a house physician at the London Hospital. The Coroner said that Mr. Wilson apparently did not pay so much attention to his own wound as he would have done to the wounds of other people. It was another life sacrificed in the interests of other people. There was no doubt that there was a great deal of generous conduct and self-sacrifice on the part of doctors. The jury returned a verdict of death by misadventure.

At the Kingston Police Court on April 1, a gentleman was summoned by the police for exceeding the speed limit at Cobham on March 21. A police sergeant said he timed the car at 29 miles an hour. When it was stopped an occupant of the car said he was Mr. Stansfield Collier, and was in a hurry to reach London to perform an operation. The witness replied that only three weeks ago Mr. Collier had told him the same tale, and that it would not do again. A house surgeon at St. Mary's Hospital stated that on the evening in question he had a critical case and telephoned to Dr. Collier, who was in Surrey, to come at once, and the latter arrived at the hospital at 10.20. Dr. Collier said he gave instructions to the driver of the car, which he borrowed because it was faster than his own, to drive as quickly as possible with due regard to safety. If he had not been stopped by the police he believed he would have saved the man's life. The Bench, under the special circumstances, thought it inexpedient to impose a penalty, and dismissed the summons, but they held that the police were justified in prosecuting.

NURSING ADMINISTRATION.

SEVEN YEARS' WORKING OF THE MIDWIVES ACT.

THE recently issued report of the Central Midwives Board presents in highly condensed form the result of the vigorous efforts which have been in progress for the last seven years to convert the untrained midwives of this country into skilled officers, amenable to discipline and under the complete control of the county authorities. In many respects the report is admirable. It gives but a bare record of the work accomplished, but between the lines it is easy to read the immense amount of personal zeal and ability which has been enlisted on behalf of the mothers and the unborn generation. The members of the Board had to construct their own precedents, interpret the laws governing their actions, frame their own rules, and establish a standard which should not on the one hand discourage the unlearned, and should yet justify their own existence. They have done much. A year ago the number of midwives on the roll was 25,634, of whom 3,326 have been admitted since the expiry of the period of grace. But of this number about half were either not practising midwifery or were doing so without notifying to the local supervising authority. An unknown number had died without their demise being reported to the Board, only 324 deaths having been officially notified during the existence of the roll. In addition to the women whose names are entered on the roll, a large number of uncertified women are known to be continuing their practice. The Midwives Act, then, has so far but imperfectly fulfilled its object of gathering together all the midwives in the country under, and placing them under, inspection. Nearly half of the women whose names they have collected are under no inspection. And an unknown number of women whose names have never been entered are continuing their calling. But this is not all. The figures indisputably show that the Act, although it is having a favourable effect in stimulating the study of midwifery and in repressing some of the worst abuses is not having the desired effect in replacing the old type of midwife by trained women. True the old type is dying out fast, but she is not being replaced. And the examinations of the Central Midwives Board are not attracting the women who could replace them. The 71 recognised training schools, the 88 recognised teachers, and the 92 approved midwives who are engaged in the instruction of the future midwife are unfortunately far too busy teaching midwifery to persons who regard this branch of work as an interesting asset in some other walk of life to trouble about the women who are fitted to live the life of the people and take upon them the duties of the moribund midwife of the old style. The total number of successful candidates in examinations held by the Board in the three years since they were instituted is 4,045; "but," says the Report, "less than 60 per cent. of the successful candidates intend to practise as midwives, the net annual addition of practising midwives to the roll being at present

under 1,000." About 10 per cent. of nurses in the prime of life in good work are lost to the profession from various causes every year. There can be little doubt that out of the 15,000 practising midwives, certified and uncertified, who it is stated in this Report are probably in practice at the present time, an annual wastage takes place of at least 15 per cent., for many are elderly women. Thus, while over 2,000 midwives fall out of the ranks for one reason or another every year, the annual number of new midwives enrolling themselves with the intention of practising as midwives is under a thousand. But this is not the most serious part of the matter. If it were only that the midwives needed by working mothers were not yet being provided in sufficient numbers to meet the demand, it would all come right in time. But when out of the successful candidates in the examinations nearly half do not intend to practise midwifery at all, and out of those who do intend to practise an overwhelming majority are not intending to practise among the poor, but are using their certificate as an additional qualification in the practice of monthly nursing among the rich, it is time to inquire in whose interests the regulations responsible for this condition of affairs have been framed. Is it a healthy thing for the public and for the midwives that every encouragement should be given to the creation of training schools for midwives in institutions, while every possible discouragement is shown to instruction being given throughout the country in the homes of the people? The Report says quite justly that "the Board is not authorised by the Midwives Act to undertake the training of midwives," but it also observes that an important part of the work lies in the authorisation of persons through whom this instruction may be given. Unfortunately the regulations have been framed with a view to this instruction being given exclusively in institutions. Now the system of training in institutions cannot be developed further without a large increase in the number of mothers who resort to institutional aid, whether meted out by private charity or by the Poor Law, in child-bearing. We do not believe this development to be in the best interests of motherhood. The instinct which leads a mother to prefer her own home for the natural process of child-bearing is a wholesome one, and ought to be encouraged. When we find—as we do from this Report—that, so far from fitting out a well-trained body of women for service among the class who rely upon the ministrations of midwives, the institution training schools are chiefly engaged in bestowing a superfluous qualification on people who never intend to make regular use of their skill, it becomes evident that the rules and regulations of the Midwives Act are failing in the purpose for which they were framed; and as long as this is so, the shortage of practical midwives will grow steadily more serious every year.

ROYAL COLLEGE OF SURGEONS.

At the last quarterly meeting of the Council of the Royal College of Surgeons of England on April 1, Sir Shirley Murphy, Medical Officer of Health to the County of London, and Mr. G. Dancer Thane, Professor of Anatomy at University College, London, were elected Fellows of the College under the clause of the Charter relating to the election of members of twenty years' standing. The Jacksonian Prize was awarded to Mr. J. P. Lockhart Mummery, F.R.C.S., for his essay on "The Pathology and Treatment of those Conditions and Diseases of the Colon which are Relievable by Operative Measures." The subject for next year will be "Tuberculous Disease of the Urinary Bladder and Male Genital Organs." The John Tomes Dental Prize for 1906-1908 was awarded to Mr. Arthur Swayne Underwood, M.R.C.S., L.D.S. Eng. The By-law (in three sections) relating to the Admission of Women to Examination for the Diplomas and to their standing in the College was made and ordained, and the solicitor of the College was instructed to submit it to the government authorities for sanction and ratification. (The text of the new by-law was printed in this column on March 27, 1909, p. 678.) A letter was read from Mr. J. Ward Cousins reporting the proceedings of the Central Midwives Board during the past year, and a vote of thanks was accorded him for his very efficient services as the representative of the College on this Board during the past six years. Mr. C. H. Golding-Bird was elected as representative of the College in place of Mr. Ward Cousins, who has retired. Sir Jonathan Hutchinson was appointed the delegate of the College to the University of Geneva on the occasion of the celebration of the 350th anniversary of its foundation in July next. Mr. Pearce Gould's period of office on the Court of Examiners of the College will expire on May 12, and the vacancy will be filled up at the meeting of the Council on May 15. Mr. H. H. Clutton was re-elected one of the two representatives of the College on the Senate of the University of London, and a vote of thanks was given to Dr. Norman Moore for his services as visitor for the Royal Colleges of Physicians and Surgeons to the examinations of the Egyptian Medical School at Cairo. On the recommendation of the Museum Committee it was decided to ask Dr. R. T. Leiper, of the London School of Tropical Medicine, to undertake the revision and renovation of the collection of Entozoa in the College Museum.

POST-GRADUATE OPHTHALMOLOGY AT OXFORD

The sixth annual post-graduate course on ophthalmology in connection with the Faculty of Medicine of the University of Oxford has been arranged from July 5 to 17. The

course is designed to be a practical adjunct to the reading of ophthalmological text-books. The first part will be concerned chiefly with demonstrating the practical examination of eye patients, the use of the ophthalmoscope, and refraction. The second part of the course will be more specialised, and lectures will be delivered by various ophthalmic surgeons. Upwards of 500 cases will be present for demonstration, and these will include many especially suitable for more advanced and experienced students and practitioners of ophthalmology. The fee for the course is £5 5s. Medical men attending will be provided with board and residence at Keble College at 7s. 6d. a day during the second week, but during the first week lodgings must be secured. Further particulars can be obtained from Mr. Robert W. Doyne, of the Ophthalmological Department of the University of Oxford, 30 Cavendish Square, London, W.

THE FIRST LONDON X-RAY CONVENTION.

A CONVENTION to include all branches of medical electricity will be held for the first time in London from July 5 to 9, 1909, under the presidency of Dr. H. Lewis Jones, of St. Bartholomew's Hospital, and the vice-presidency of Mr. W. Deane Butcher. The inaugural meeting, the general meetings, the demonstrations, and the exhibition will be held at University College, Gower Street. The exhibition will include all classes of electrical and physical apparatus for medical treatment, and will be held simultaneously with the convention. Makers and inventors will have an opportunity of showing novelties in apparatus. Representatives of American and Continental Governments will be invited to take part in a discussion as to the best means of providing apparatus and training for the army and navy. Papers (limited to 15 minutes in duration of delivery) and debates will be in English, but papers in French and German will also be accepted provided *résumés* are sent in English. Various distinguished continental medical electricians, radiographers, and physicists have already promised to attend and read papers. The inclusive subscription for members of the convention will be one guinea, to be devoted to an entertainment fund. All medical practitioners are invited to attend the exhibition, the demonstrations, and the meetings, and to take part in the discussions, to which they will be admitted on presentation of their visiting cards. The executive committee consists of Dr. Lewis Jones, Mr. Dean Butcher, and Dr. E. Reginald Morton (honorary secretary and treasurer), and the organising secretary of the convention is Mr. Ernest Schofield, 11 Chandos Street, Cavendish Square, W., to whom all communications should be addressed.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For CONSTIPATION.

Professor D. LAMBL, of Warsaw, Professor of Clinical Medicine at the University, writes—

"Hunyadi János Bitter Water, besides being an excellent general aperient, has proved specially efficacious in the treatment of chronic constipation, venous obstruction and congestion, hæmorrhoids and obesity.

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label. [1]

The Hospital

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SATURDAY, APRIL 17, 1909.

PERSONAL RIGHTS AND PREVENTIVE MEDICINE.

A TRACT has been forwarded to our offices from the Personal Rights Association which contains certain letters from the Committee of that organisation to the War Office and Admiralty, with the replies; and as the matter discussed has bearings which affect much wider issues than those immediately under consideration, it may be not amiss, even at the risk of repeating an oft-told tale, briefly to examine some of them. The particular point which aroused the anxiety of the Association was a hope expressed publicly by a naval surgeon at the last annual meeting of the British Medical Association that at some future date the progress of bacteriological research will render possible efficient vaccination against syphilis, and that such vaccination will be carried out as a routine in the same way as is the prevention of smallpox. This expression of individual opinion seems to have been magnified by those for whom the author of the pamphlet under consideration acts as spokesman into the semblance of a very grave and imminent attack upon the liberty of the subject; and in consequence the Government departments were bombarded with indignant letters and repeated questions in Parliament. We regret that the sensible attitude maintained at first by the heads of the War Office and Admiralty was, after persistent browbeating, abandoned somewhat by the First Lord of the latter.

Now on the question of the preventive treatment of venereal disease, whether by vaccines or mercurial ointments or any other methods, we do not propose on this occasion to dilate, further than to point out that the great bulk of medical and scientific opinion is opposed to the views held by those who secured the repeal of the Contagious Diseases Acts, and that there are large numbers of earnest and eminent men and women of all parties who agree with the profession in the matter. There is much to be said over such a question, but as the Association reverted from the particular to the general in the various memorials which were forwarded to the Secretaries of State, it will be well to follow their example. It is stated that the services of the Army and Navy are unpopular among large classes of the people owing to the "tyrannical subversion of these liberties" (of the country) "by medical faddists and experimenters and others," and also that there is

greater jeopardy to those who do enter the services from the injection "of vaccines, serums, and anti-toxins from the witches' cauldron of the latest craze in therapeutics" than from foreign foes. Anything more utterly opposed to the truth we do not remember to have recently read. The absurdity of these and other similar statements might be left to the common sense of the public were it not that similar innuendoes have been bandied across the floor of the House of Commons, under the guise of questions to Ministers, and are now being distributed broadcast to those who may not understand that such a proceeding is no guarantee of their truth.

The situation resolves itself, therefore, into this—that the Personal Rights Association objects to all forms of preventive treatment (and presumably of curative treatment also) which involve the use of bacteria or bacterial products or the applications of bacteriology. By a convenient fiction they speak of vaccination *against* syphilis as vaccination *with* syphilis, and affect to treat the operation as the actual inoculation of the patient with that disease. But they go much further than this, for the passages we have quoted can logically bear only the wider interpretation we have just given them. If these principles are pushed to their natural conclusion the garrison of Malta must once more be fed on goats' milk, and Malta fever must continue to decimate the unfortunate troops and sailors; for it was the "medical faddists" who by their "trial of experiments" established the ætiology of the disease, and by their "shameless communication" of it to "the animals which are, perhaps, the nearest relations of man" abolished it and the enormous annual suffering which it entailed. So, too, on the same lines the campaigns against malaria, sleeping sickness, yellow fever, and dozens of other tropical scourges must be abandoned. After some laudation of themselves as "patriotic citizens of a nation which has won its renown and strength in the past by its devotion to the principles of freedom," the Committee later on put up one of the Vice-Presidents to ask in Parliament whether the First Lord of the Admiralty would give an assurance that no man on entering the Navy should be subjected to voluntary or compulsory syphilisation by the surgeons or others in authority. Passing by the equivocation,

deliberate though it no doubt was, which is conveyed by the term syphilisation, we would emphasise the three preceding words as evidence of what the Personal Rights Association means by the principles of freedom. We would further call to the attention of this Association that the phrase "blood poisoning," when employed as equivalent to and synonymous with vaccine and serum and antitoxin treatment, is a gross misuse of language, the effect of which must be to deceive the uninstructed. Otherwise several hundred thousand—perhaps several million—children are being saved from death annually by "blood poisoning" with diphtheria antitoxin; and thou-

sands are willingly undergoing "blood poisoning" at their own request at this moment for various diseases. If to inject substances under the skin is to poison the blood, then morphia and strychnine thus given are every whit as much to be prohibited as vaccines or any other preparation of dead microbes or microbic products. Even the Personal Rights Association might hesitate to describe the injection of strychnine as blood poisoning; yet we do seriously call to their notice the strict analogy between such a drug and tuberculin, or any other non-living therapeutic agent. Both are the products of vegetable life, both are dead, neither is injected into the blood; what essential difference is there between them?

LECTURES ON MEDICAL ETIQUETTE.

It is almost a truism that, Medical Ethics and Medical Etiquette, those powerful factors in the professional and social life of every medical man, stand in increasing need of codification, if not of simplification or entire revision. The rules of conduct governing our relations one with another, and with our patients and their friends and the public generally, have many of them arisen naturally out of our peculiar position in the social machine. It may indeed be said with justice of at least a majority of these rules that their essential object is the maintenance of the dignity and honour of the profession, and the well-being of the public to which it ministers. That these two worthy objects are now and then difficult to reconcile in particular instances is an inevitable drawback, which should not however excuse the abandonment of any sensible scheme for the definition and systematisation of the Laws of Medical Etiquette. The fundamental rule of civilised human conduct "Do unto others as you would they should do unto you"—however much obscured by needless forms and usages—still lies at the bottom of most of our professional observances. Even those rules which to the lay mind seem the most exasperating and capricious are yet capable of honest defence. Scarcely less common than the traditional layman's sneers at the expense of medical etiquette—which too often seems to him a senseless incubus of red-tape and ritual, designed to come between patient and doctor—are the legitimate professional complaints at the uncertainty and lack of authoritative ruling with which the ethics and etiquette of our profession are encumbered. Situations daily arise in actual practice or in the business aspects of medicine, which are complicated by considerations of medical etiquette or occur solely through ignorance or misinterpretation of its unwritten laws. Newly qualified men enter practice entirely uninstructed in the principles of medical ethics; and, even when brought up in a professional household, their ideas upon medical etiquette are

for the most part crude, hazy and confused. The better class of medical student (happily more and more common nowadays) when he qualifies and begins his life work, needs no lectures or demonstrations upon the principles and practice of "playing the game." But there is more than that in medical ethics, just as there is more in medical etiquette than a nice familiarity with the procedure of after-dinner-party calls, and the correct management of the hat and umbrella. With this in mind, an anonymous "G. P." wrote recently to the *St. Bartholomew's Hospital Journal* suggesting that one or two lectures should be given in the medical school of his old hospital at the end of each session, on Medical Ethics and Etiquette, to those students who have finished their course and are just about to qualify. He proposes, very pertinently as it seems to us, that these lectures should be given by "some well-known general practitioner of high standing and long experience; and not by a consultant on the hospital staff, whose career has not enabled him to gain experience of the petty annoyances and temptations to diverge from the straight path, which are so often cropping up in the life of the general practitioner." He maintains finally that "the opinion is almost universal among general practitioners that instruction to young medical men in these subjects is desirable"; and, with the reservation that this idea has hitherto to a large extent been felt subconsciously rather than expressed openly, we agree. In the following issue (that for April) we observe a note to the effect that a recommendation has been sent up from the council of the Students' Union of St. Bartholomew's Hospital, asking the Medical School Committee to arrange for lectures to be delivered by prominent general practitioners upon the lines suggested. The proposal has our warm sympathy and support; and we hope that the experiment will be permitted by the authorities and that such success will attend the early lectures that other medical schools will follow suit.

ANNOTATIONS.

Neurasthenia and Quackery.

WE wonder how long it is to be possible for brazen unscrupulosity to foist on the public and the profession goods of very small value—almost none at all—at inflated prices. An especially gross case in point has recently been exposed in the weekly newspaper *Truth*. The “remedy” in question has been extensively advertised as a sovereign cure for the “twentieth century disease—neurasthenia,” along with blood-curdling descriptions of the symptoms and the awful sequelæ of its uncombed ravages. One of the most amusing features of the campaign of mendacity by which the sale of this product—antineurasthin—has been pushed is the defeat of the Revenue authorities by the proprietors, who successfully maintained that their article is of the nature of a food, and not a drug; and consequently that it is not liable to pay stamp duty. The truth of this contention is clearly manifest when it is added that antineurasthin consists, according to an analysis conducted by the *British Medical Journal*, of dried egg and milk, and that the four tablets of it recommended as a daily dose are approximately equal to a teaspoonful of the former and two ounces of the latter. The comedy thickens when we learn that the eminent analyst, whose distinctions and qualifications take up seven or eight lines of print, lives in upstairs lodgings in a small house, and when not engaged in writing glowing testimonials of the healing virtues of patent remedies spends his time as a member of a travelling theatrical company.

Improved Mortuaries.

ATTENTION has many times been called by coroners and coroners’ juries, and in the columns of the medical press, to the scandalously imperfect equipment of public mortuaries in Britain generally and in London especially. Since the system of holding inquests in hospitals, where up-to-date mortuaries are now usual, has been virtually abandoned, this backward state of the metropolis has been more than ever forced upon the attention of juries, pathologists, and, in fact, everyone whose duties call him to a coroner’s inquest. Those more immediately concerned must almost have given up hope of seeing any remedy provided; but we are very glad to notice, in the report of an inquest held at Southwark, that the coroner (Dr. Waldo) was able to announce to the jury that the City Corporation has agreed to install the Rechter apparatus for the treatment of bodies deposited there. This consists in an air-tight chamber, wherein the body can be chemically treated in such a way as to prevent decomposition, and at the same time to place no obstacle in the way of subsequent post-mortem examination. The advantages of some such arrangement over the haphazard plan of allowing all corpses to undergo putrefaction without hindrance are varied. Thus unidentified persons can be preserved for some time pending identification; also the bodies of those in whom post-mortem changes are already extensive, as in those found

drowned, are protected from such further progressive change as may hinder proper elucidation of medico-legal points connected with the mode of death and of identification. To pathologists and any who may have to undertake autopsies the value of the change is incalculable, from the point of view not only of their own convenience, but also, and more important, of their health and the efficient discharge of their duties. To the City Coroner congratulations may be offered on the success of his long campaign of reform, which will be a good omen to the other coroners of London who have also interested themselves in the question. The London County Council ought not to be outdone by the City Corporation, and it is to be hoped that steps in the right direction will soon be taken.

The Government and the Alcohol Congress.

WE have repeatedly expressed the opinion that the immense social problem of alcoholism can only be dealt with satisfactorily by means of organised investigations along scientific lines. We anticipate, therefore, that some definite progress in the combating of the evil will result from the twelfth International Congress on Alcoholism, which will be held at the Imperial Institute, London, on July 19 and following days; and we are glad to learn that the delegates will be entertained at a reception by the Government at the Imperial Institute on the evening of Monday, July 19. The arrangements will be made and the expenses defrayed by the Government, and, presumably as a guarantee of good faith, we note that only non-alcoholic drinks will be provided for the refreshment of the delegates. The Foreign Office has invited the Governments of the following countries to send official representatives to the congress:—The United States, France, Germany, Denmark, Norway, Sweden, Switzerland, Russia, Austria, Hungary, Roumania, Italy, Belgium, Holland, Uruguay, and Mexico. The Colonial Office has also extended similar invitations to the Governments of all our self-governing Colonies; and the Government of India is being consulted by the India Office with a view to the appointment of a representative for India. By permission of the Home Office, Dr. R. W. Branthwaite, the Inspector under the Inebriates Acts, will attend the Congress, as will Lieutenant-Colonel McHardy, chairman of the Prisons Commissioners for Scotland, and Sir George O’Farrell, Inspector of Lunatic Asylums in Ireland. It is estimated that the delegates will number nearly 2,000, of whom probably 500 will come from foreign countries and the Colonies. The Hon. President is the Duke of Connaught and the Chairman of Committee is the Dean of Hereford. We earnestly hope that a truly scientific spirit will animate the whole of the proceedings of the Congress, and that every speaker will remember that the cause of temperance in the present state of public opinion has more to fear from intemperate language on the part of its advocates than from almost anything else. With this word of caution we beg to offer our most cordial wishes for the success of the Congress.

MEDICAL OPINION AND MOVEMENT.

IT will be remembered that, as a result of his researches on coagulation, Wright suggested the administration of sodium citrate with the milk for infants, with a view to inhibit the coagulation and cause the formation of small clots after the manner of human milk, instead of the usual bulky clots of cow's milk. Dr. Gaucher, of Montpellier, has been conducting a large amount of research on the digestion of milk, and he finds that sodium citrate, even in doses of 8 grammes per litre, does not impede coagulation in the stomach. According to this author, if rennet be used to coagulate the milk *in vitro*, citrate of sodium will inhibit coagulation for several hours; but if gastric juice itself be used, even in much less quantity than is ordinarily secreted by the stomach during the digestion of the milk, sodium citrate has no inhibiting effect at all. He gets the same results by substituting sodium fluoride for the sodium citrate—inhibition in the case of rennet, but no effect with gastric juice. He suggests that the gastric juice brings a further quantity of calcium to the milk which is sufficient to cause its coagulation. It would appear, therefore, according to this author, that such anticoagulants as sodium citrate have no therapeutic value in the way that has been suggested.

IN a communication to the Society of Physicians of Vienna, Dr. Exner draws attention to the fact that the position of the heart between the lungs enables it to get rid of the over-production of heat which necessarily accompanies its continual work. The lungs act as coolers to the heart, which would otherwise tend to be overheated. The work of the heart amounts to 10,000 kilogrammetres per day, of which about two-thirds are transformed into heat, giving approximately 70 calories, whereas, according to the weight of the heart, it should not produce more than 13 calories. Yoshimura has carried out some observations on the temperature of the heart and lungs in animals, and finds that the temperature of the ventricular wall exceeds that of the lungs by 0.5°C . The temperature of the lungs diminishes in proportion to the distance from the heart. He finds, too, that the ventricular wall has a higher temperature than the blood it contains, amounting to 2°C . Moreover, the blood in the right ventricle is hotter than that in the left. In the latter case it has been presumably cooled by its passage through the lungs. By surrounding the heart with cotton-wool, so as to prevent the conduction of heat to the lungs, the temperature rises, the heart-beats become more rapid, and then cease. If the cotton-wool is removed, the heart contracts again. Although it may be correct to assume that the position of the heart between the lungs facilitates the dispersion of excessive heat produced by the heart, these experiments would also appear to indicate that a large proportion of this heat is carried off by the blood circulating within it. While it is shown that there is a difference of 0.5°C . between the ventricular wall and the lungs, the much greater

difference of 2°C . between the heart and the contained blood suggests that the dispersion of excessive heat from the heart takes place more especially in this direction.

IN *La Clinique de Paris* Dr. Sersiron makes a contribution on the sun-bath, and speaks very enthusiastically of its therapeutic effects in all forms of tuberculosis and in cases of lymphatism and anæmia. In Germany this mode of treatment is in great repute. It is stated that in the environs of Dresden every Sunday 3,000 persons indulge in a sun-bath, in the costume of Adam, at the cost of 50pf. a head. In France it is not popularised in this way, but the treatment is carried out under medical supervision at several "solariums" on the Riviera, and the results obtained appear to be highly satisfactory. The treatment must be gradual and progressive. At first only the part affected with disease is exposed to the sun's rays for a few minutes. Solar dermatitis must be avoided, but as soon as the skin has reacted by the development of pigmentation, exposures of several hours can be made. It is observed that the greater the pigmentation of the skin, the more favourable is the reaction of the patient to the treatment. The author quotes several statistics showing the favourable results that have been obtained by the treatment. The duration of the treatment is considerable. Tuberculous patients of the first degree require a year, and more severe cases 18 months to two years. The action of the rays is probably of a mixed nature. It is suggested that it is in part electric, as every form of heat is accompanied by the production of electricity. The red rays are excitants of the nervous system and are tonic; they are vasodilators, and produce a passive congestion analogous to that of the method of Bier. The yellow and green rays are supposed to influence the red corpuscles similarly to the action of the red rays upon the chlorophyll of plants. The blue and violet chemical rays are destructive of the ferments, diastases, the microbes and their toxins, and the ultra-violet rays probably have a similar action. Such is briefly the hypothetical explanation of the therapeutics of the sun-bath. Of its efficacy the author is evidently thoroughly convinced. Unfortunately, climatic conditions are not favourable in this country for the practical adoption of the treatment.

AT a recent meeting of the Academy of Medicine of Paris, Dr. Chantmesse made an interesting communication on the coagulation of the blood in certain morbid conditions, and the occurrence of fatal embolism, especially after operations for the removal of uterine fibromata. It is a well-established fact that the coagulability of the blood varies under different conditions, and it has been shown that this is often increased, for instance, in typhoid fever. Wright explains this increase as caused by an excessive amount of calcium salts in the system owing to the milk diet, and suggests the

administration of citric acid to counteract the effect. He has definitely shown that the coagulability of the blood can be diminished by the administration of citric acid, and increased by calcium salts. Dr. Chantemesse suggests however, that there is a further physiological factor in the determination of the degree of coagulability of the blood—namely, the reaction of the organism to hæmorrhage. Continual loss of blood, as in the case of uterine fibroids, or in some cases of typhoid fever induces spontaneously an increase of coagulability as a protective measure. When added to this increased coagulability there is a stagnation of the blood in the veins, thrombosis and embolism are likely to intervene. It is in this way that the author seeks to explain the frequent occurrence of fatal embolism after removal of uterine fibroids. He advises, therefore, that an estimation of the coagulability of the blood should be made both before and after operation in these cases, and that, if necessary, citric acid should be given in doses sufficient to reduce it to a normal degree. He thinks in this way such untoward accidents might be successfully avoided.

EXPERIMENTS with Digitalis on the Frog's Heart and its homologues seem to have convinced Pohl that the association of such drugs with others in a mixture does more harm than good. He publishes his conclusions in the *Therap. Monatshefte*. He finds that all acid drugs destroy the action of digitalis; while quinine retards the effects of the contained glucoside. If potassium salts are prescribed along with strophanthin to increase diuresis, they exert an inhibitory action on the latter drug. On the other hand the action of strophanthin is intensified by the addition of an ammoniacal solution of anise, as it is also by chloroform water. Tincture of opium moderates the effects of the drug, and caffeine has a marked inhibitory action. The author is therefore of opinion that if rapid results are desired, digitalis and its congeners must be prescribed by themselves.

AN interesting article from the pen of Miramont de Laroquette appears in a recent number of *La Revue Médicale de l'Est*, dealing with the therapeutic and hygienic aspects of the Incandescent Electric Lamp. According to the author this lamp emits rays whose action is in every way similar to those of the sun. They increase the rapidity of growth of plants, while they arrest the development of and eventually kill such lowly forms of vegetable life as bacteria. In men and other animals they provoke a marked hyperæmia with erythema, sweating, and increased cellular activity, and in addition have an analgesic action. A temperature of 150° can be imparted to the surrounding air by the lamps. These light baths have a sedative action on the nervous system, and lower the blood pressure. They are especially useful in the treatment of chronic inflammation, the sequelæ of acute infections, as also in chronic rheumatism and gout. The author recommends their use in acute conditions which are accompanied by subnormal temperature; also where rigors are present and in conditions of profound shock such

as are observed after intestinal perforations, and in the various choreiform affections. Post-operative shock and paralysis of the intestine after laparotomy are also benefited by these baths. The active hyperæmia induced by the rays facilitates the resorption of inflammatory exudates, softens scars, and even promotes the dissipation of fibrous new growths, while the processes of repair are awakened in indolent wounds and ulcers. The analgesic action of the rays is particularly useful in the treatment of neuralgia and painful chronic diseases. Among other affections treated by this method may be mentioned obesity, arterio-sclerosis, and neurasthenia. Many observers claim to have cured cutaneous disorders such as psoriasis by the rays, and Minirow has published a case of lupus cured by their means.

A NEW method for the Diagnosis of Gastric Ulcer is described by Bonninger in the *Berliner Klinische Wochenschrift*. It is well known that one of the most important symptoms of this malady consists in the onset of pain about half an hour after taking food. This pain is attributed to the gradual acidification of the stomach contents, and it increases in severity *pari passu* with the intensity of the acidity. Relying on these facts the author has evolved a method of diagnosis whereby the stomach is thoroughly washed out with plain water in the early morning when the patient is fasting; the washings are then removed and about 100 c.c. of a 5 per cent. solution of hydrochloric acid is introduced into the organ. If a gastric ulcer is present the patient is promptly seized with violent pain in the stomach. This is immediately relieved by the administration of a little milk. If, however, no pain is felt the patient is made to change his position so that the acid may come into contact with every part of the mucous surface of the stomach. Should no pain declare itself after this manœuvre it is concluded that no ulcer exists. Obviously this method only serves to render the pain, common to this affection, more characteristic, and it cannot therefore be applied in cases in which no pain is present, even when the stomach is in the full activity of digestion. It must, however, be noted that the acid solution causes no pain in healthy persons nor in those suffering from gastric disease other than ulcer. The author further claims that by his method the progress of cicatrization of the ulcers can be followed. We can, however, imagine various objections to a means of observation which involves repeated bathing of the injured and highly sensitive gastric wall with an irritant acid.

THE curious condition known as Multiple Hereditary Telangiectasies (Osler), and also as Telangiectasis Circumscripta Universalis has been prominent in medical literature during the last year or two. In fact, during the last three years eight such families have been reported, as against but six previously recognised in all. The most recent of these are two families described in the *Johns Hopkins Hospital Bulletin*, by Dr. Hanes. In one of these, out of fourteen individuals who comprise the last four generations, nine are sufferers from hereditary telangiectasies; in the other, four sisters are affected out of a family of nine.

whose father transmitted to them the tendency. Appended to the details of these families are abstracts of all the other cases so far published, and a summary of our knowledge of the lesion, which seems to be less rare than has until recently been supposed. This summary carries us rather further than Professor Osler's similar survey of the condition in the *Quarterly Journal of Medicine* of October 1907. The disease is defined as an hereditary affection manifesting itself in localised dilatations of capillaries and venules or telangiectases, particularly common on the face, nasal and buccal mucosæ, and finger-tips. Its most striking characteristic, next to the very markedly hereditary nature of the lesion, is its tendency to set up profuse hæmorrhages, either spontaneously or as the result of trauma. These hæmorrhages are often of alarming severity, and have in some of the reported instances caused death.

AT the same time it is clearly to be understood that the condition is totally distinct from hæmophilia. Thus arthropathies, hæmaturia, and melæna are never found. It does not, as hæmophilia does, affect males only; nor is the tendency transmitted through the unaffected females. It appears equally in males and females (some think more frequently in the latter), and can be transmitted by either parent. It is said that there is no instance in the literature of an affected patient having children all of whom have been free from the disease. Repeated traumata are believed to play a part in the production of telangiectases, and in the rupture of those already formed by such trivial acts as blowing the nose, eating, and so on. Another ætiological factor to which Hanes is inclined to attach importance is the abuse of alcohol; but it must be added that Osler does not mention such a factor. Epistaxis is the commonest form of hæmorrhage. The condition has been found as early in life as eight years old, but usually begins to show itself in the third decade. As regards treatment, Professor Osler thinks calcium lactate did one patient a great deal of good, though another one under his care got no benefit from the chloride of that metal. Apart from this, cauterisation of the individual lesions seems to be the only way to relieve the condition. This Hanes advocates by the use of chromic acid, applied to every telangiectasis in turn, at several sittings if necessary. This author proposes yet a third name for the disease (which he regards as a definite clinical entity), different from the two it has already received. But his suggestion of hereditary hæmorrhagic telangiectasia differs so little from Professor Osler's name that the change seems unnecessary.

A CASE of Tobacco Amblyopia from cigar-smoking by a woman is reported in the *California State Journal of Medicine*. The patient was fifty-two years of age, and a woman of education and refinement. She consulted Dr. W. S. Franklin, of San Francisco, for failing sight, which she had noticed coming on gradually for some time, but had attributed to her advancing years. On examination it was found that vision was reduced to finger-counting at five feet in both eyes, that an absolute

central scotoma for red and green existed, and a relative scotoma for form. When questioned as to alcohol and tobacco she denied the former absolutely, but admitted at once that she had been smoking six to eight cigars a day for two years past. The author thinks it is quite certain that the answer about alcohol was a truthful one. On ophthalmoscopic examination the discs were found to be distinctly pale, but no other ocular abnormality existed. In six months vision was restored to $\frac{5}{6}$ with a correcting cylinder of one dioptré, and to $\frac{5}{6}$ without it. This happy result Dr. Franklin regards as additional proof that the amblyopia was purely due to tobacco, as the prognosis in toxic amaurosis due to mixed tobacco and alcohol poisoning is much less favourable. He remarks that cases of pure tobacco amblyopia, such as this, are rare in women, who, as is well known, suffer much less frequently from these lesions than do men. Yet another curious feature about the case was the indulgence in cigars alone: cigarettes and pipes had never been used. It is, as the author points out, extraordinary how little attention is bestowed even by intelligent people on progressive failure of their sight almost to blindness, so long as it is painless and gradual in onset.

DR. SEYMOUR TAYLOR, in a lecture on Epilepsy printed in the *West London Medical Journal*, emphasises the instability of cortical centres other than the motor in this disease. Not only may the chief lesion be in the psychical or sense areas of the cortex, it may even be in the cerebellum, the optic thalamus, the medulla, or the spinal cord. Moreover, wherever the principal lesion is, the effects of its "hyperphysiological discharge" spread rapidly to other centres which, in the case of true epilepsy, are similarly but less severely affected. On this hypothesis the "aura," be it gustatory, visual, auditory, psychical, or what not, is the beginning of the fit; and petit mal is epilepsy of some psychical centre or centres which passes off without extending to the motor cortex. On this hypothesis also Jacksonian epilepsy is explained, for this is due to local irritation of the motor cortex by growth, blood clot, depressed bone, or other gross lesion, which can so far upset the stability of the cells affected as to provoke discharge there, but is powerless to cause spread to the neighbouring healthy cells not irritated. Dr. Taylor describes cases which he has diagnosed as epilepsy of the psychical centres alone, in some of which the ordinary manifestations have subsequently appeared. One patient was subject without warning to long trains of peculiar thoughts which were unconnected with each other and with her occupation at the moment; she was during these attacks unable to proceed with reading or anything else she might be doing, and was in fact only semi-conscious. Other patients have roaring in the ears, distressing taste sensations, or other "auræ," without the slightest mental confusion; these patients are benefited by bromides. Nocturnal enuresis has long been recognised as occasionally due to unsuspected epilepsy, and Dr. Taylor thinks that some instances of tumultuous and irregular cardiac action without discoverable cause have also a similar foundation.

HOSPITAL CLINICS.

MODERN VIEWS ON HEREDITY.

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(A Lecture Delivered at the N.E. London Post-Graduate College.)

HEREDITY is a general term signifying the genetic continuity which links one generation with another. It implies, as Galton well expresses it, that "like tends to produce like." The physical basis of heredity is the fertilised ovum, which, according to Darwin, is "the most wonderful object in nature." It is, indeed, difficult to comprehend the extraordinary molecular complexity and physiological potentialities that reside in the ovum and spermatozoon. The reproductive cell of a woman measures only $\frac{1}{160}$ inch, while the spermatozoon is only $\frac{1}{100000}$ of the size of the ovum. And yet the potentiality of this minute speck of protoplasm is so marvellous that a son not only resembles his father in external appearance, but reproduces his very gestures, and, it may be, the tones of his voice.

Weismann regards the chromatin network of the nucleus of the germ cell as the bearer of the hereditary characters. It would serve no useful purpose for me to go into the question of the extrusion of polar cells preceding the ultimate fusion of the male and female germ cells. We must, however, briefly refer to the principal theories of inheritance and the laws which govern its manifestations. We will also touch upon some of the more interesting problems of heredity.

Darwin's theory of *pangenesis* suggests that all the cells of the body give off representative gemmules, which find their way somehow to the reproductive elements, so that the latter come to contain representative samples of the various component parts of the body, and are, therefore, able to develop into an offspring like the parent. This theory has been largely discarded.

Weismann's theory of "*germinal continuity*" or "continuity of the germ plasm" is the hypothesis which has obtained most adherents. Weismann holds that when the parent's body is developing from the fertilised ovum, a residue of unaltered germinal material is kept apart to form the future reproductive cells, one of which may become the starting-point of a child. The germinal material which starts an offspring is thus maternally continuous with the germinal material from which the parent arose.

Professor Francis Darwin, in his address to the British Association last year, set forth some of the difficulties which exist in accepting either his distinguished father's theory of *pangenesis* or Weismann's theory of *germinal continuity* as affording a satisfactory explanation of heredity. He enunciated a new theory which he called the "*mnemonic*" (memory) theory, based on the conjecture that stimuli are not necessarily ephemeral, but leave a trace or record—"engram"—on the organism. In dealing with the movements of plants, Professor Darwin showed how changes in environment act as

stimuli, and this is true not only of temporary changes of shape, but also of permanent alterations. He suggested that the dim beginnings of habit or unconscious memory in the movements of plants and animals must find a place in morphology. If external stimuli may thus determine, not only the first stages in development, but also elaborate structural differences, we must then allow, with whatever words we disguise the admission, the inheritance of acquired characters.

BI-PARENTAL HEREDITY.

In the higher forms of life, parthenogenesis must be regarded as extremely exceptional, though it is common enough in some of the lower forms. For all we know to the contrary it may occur in an infinitesimal number of cases even in the human species.

At present we need only deal with sexual reproduction. From both parents comes the inherited organisation, which, according to Weismann, has its seat in the chromosomes of the nuclei of the ovum and spermatozoon. From the father comes the centrosome which organises the system of cell-cleavage and distributes the dual inheritance between the daughter cells. Huxley, as far back as 1878, stated that it is conceivable, and indeed probable, that every part of the adult contains molecules derived both from the male and female parent, and that, regarded as a mass of molecules, the entire organism may be compared to a web, of which the warp is derived from the female and the woof from the male. There is thus, as Professor Arthur Thomson expresses it, an intimate and orderly union of maternal and paternal elements.

The characters of both parents may be "blended" in the offspring, or the resemblance may be "unilateral" (the child resembling one parent) and often crossed, the son taking after the mother and the daughter after the father. In respect of certain characters the paternal inheritance is often more potent than the maternal, and *vice versa*. Weismann made a theoretical suggestion that there may be a germinal struggle in the arcana of the germ cells, a struggle in which the maternal and paternal contributions may blend and harmonise, or may neutralise one another, or in which one may conquer the other, or in which both may persist without combining.

The fact that a particular character—such as a diseased condition—sometimes skips a generation simply implies that in the intermediate generation the predisposition was there latent and unexpressed owing to the absence of the appropriate stimulus. Thus in the case of hereditary insanity, if a girl in one generation makes a happy love marriage she may remain normal throughout life, while her daughter, who may suffer a severe love disappointment, may get an attack of acute mania.

LAW OF FILIAL REGRESSION TOWARDS MEDIOCRITY.

There is a tendency for children of exceptional parents to regress towards the average stock. Galton terms this tendency filial regression. This applies equally to exceptional physical and mental characters. Thus, though tall stature may run in certain families, yet there is always a tendency to revert to the mean average size. Similarly, the children of a genius tend to have somewhat less than their father's power, but more than the average of the race. According to Professor Pearson, distinguished parents are just ten times more likely to have distinguished offspring than undistinguished parents. Still such cases as the Darwins, father and sons, the two Pitts, Philip and Alexander the Great are exceptional. Similarly, also the children of a criminal tend to be less vicious than the father, though morally inferior to the average man.

THE LAW OF ANCESTRAL INHERITANCE.

Galton's studies in connection with Basset Hounds enabled him to formulate a most important law in regard to inheritance. According to this *the two parents between them contribute on an average one half of each inherited faculty, each of them contributing one quarter; the four grandparents contribute between them one quarter, each contributing one sixteenth, and so back ad infinitum.*

Reversion, according to Professor Pearson, signifies the reappearance in one individual of a character which is recorded to have occurred in a definite ancestor of the same race; while *Atavism* signifies a similar reappearance of a character, not typical of the race, but found in allied races, supposed to be related to the evolutionary ancestry of the given race. Most authorities use the two terms as synonymous. *Reversion* simply means that certain potentialities, which form part of the heritage, may remain dormant and unexpressed for lack of the appropriate liberating stimulus.

Mendel, in connection with his studies in the crossing of plants, made a discovery that in cases where dissimilar characters meet in one individual there is, on the formation of germ cells, a separation—"segregation"—between the two characters. One of these characters is spoken of as the "dominant" and the other the "recessive"; in the case of each pair of characters the "dominant" is the one which in the first cross prevails to the exclusion of the other—the "recessive." The numerical proportion of dominants to recessives in the first cross is, on an average, 3 to 1. In the first generation, therefore, derived from the cross, there will be 75 per cent. of "dominants" and 25 per cent. of "recessives." The offspring of the recessives remain pure recessive, and in subsequent generations never produce the dominant again; they thus breed true. In the case of dominants, however, two classes of offspring result, one consisting of pure dominants and the other of mixed offspring composed partly of recessives and partly of dominants. The normal proportion of pure dominants to mixed offspring being as 1 to 2. The pure dominants, like the pure recessives, breed true, and only give rise to dominants in succeeding generations. To take an illustration; in the case of eye-colour in men, the presence of pigment is a dominant,

while in the case of the malady known as colour-blindness, the blindness is dominant in males and recessive in females, according to Professor Bateson. This observer states that a large number of hereditary diseases follow Mendel's "Law of Heredity."

Telegony is a term which has been applied to those cases where an offspring resembles not so much its own father, but a previous mate of its mother. From the evidence collected by Romanes and others there seems to be little doubt—in spite of much disbelief—that the male may, through effective impregnation of a female, exert such an influence on the mother that the subsequent progeny born by the same female to a different sire resemble the father of the first-born. It is indeed an axiom with all breeders of thoroughbred stock that to keep a strain pure there must be no admixture with stock of another blood. Thus in the case of sporting dogs, if a female has been accidentally crossed by a collie, her value as a mother of pure-bred dogs becomes greatly diminished, as in the future, even though mated with a pure-bred sire, she may not breed true, but may bear progeny partaking of the collie character. The most notable instance is the oft-quoted case of Lord Morton's Arabian mare, which was experimentally mated with a quagga, and produced a foal marked with zebra-like stripes. Subsequently the same mare had two other foals sired by an Arab horse, and these also showed less distinct zebra-like markings.

Sir William Turner, discussing this case, expressed his belief that the mother had acquired during her prolonged gestation of the hybrid, the power of transmitting quagga-like characters owing to the interchange of material, nutritive or otherwise, which had taken place in connection with the nutrition of the embryo. In this way the germ-plasm of the mother belonging to ova which had not yet matured had become modified while still lodged in her ovary. The theory of telegony, if correct, illustrates how the germ-plasm may be directly influenced by the soma, and would also serve to explain the transmission of acquired somatogenic characters.

Is there any ground for believing that a woman's first husband, who perchance may have had an hereditary tendency to some disease, may so impress his wife that after his death she may transmit the hereditary taint to her future children by a healthy husband? It is only right to mention that many of these so-called cases of telegony are believed by many competent authorities to be simply cases of reversion to some remote ancestor, though it seems impossible to explain all cases on such an hypothesis. Professor Arthur Thomson believes that some physiological influence, as yet not understood, may pass from the male to the female distinct from the act of conception.

THEORY OF MATERNAL IMPRESSION.

This is a subject of great interest, the belief in which has prevailed in all nations from the earliest times. Even at the present time most women are convinced that emotions and mental states during pregnancy may so affect the foetus as to impress upon it definite structural alterations. Biblical students will readily recall Jacob's hebraic foresight in adding to his flocks and herds by setting peeled straked rods

before them, so that the sheep and kine straightway brought forth ring-straked, speckled and spotted offspring. Personally I have no hesitation in affirming my belief in the possible transmission of psychological characteristics from the pregnant woman to the developing embryo *in utero*. It is, indeed, conceivable that such influences passing from women endowed with refinement, culture, and high aspirations may have far-reaching effects in promoting the higher evolution of the species. . . . The mother of the future may recognise her responsibility in regard to the results which her life and conduct may have on the welfare of her unborn child. Last year I showed at the North Eastern Clinical Society a ten-months-old child, whose back was completely covered by a large brown hairy nœvus, the occurrence of which was attributed by the mother to her having had during her pregnancy a severe shock from witnessing a fight between two dogs, one of which was brown.

Dr. Ballantyne, the distinguished teratologist, records an instance of a woman who, when three months pregnant, saw one of her children nearly amputate the middle, ring, and little fingers of his left hand by playing with a chopper. When her child was born it was found to be minus the middle, ring, and little fingers of the left hand. It is difficult to explain such a case by the theory of mere coincidence. Personally, I think there is little doubt that emotional or mental states of the mother may in different ways affect the development of the fetus *in utero*. Many of the foremost obstetricians in America are strong believers in the potency of maternal impression, while other authorities equally eminent, emphatically express their disbelief in the doctrine, the validity of which must therefore remain *sub judice*.

ORIGIN OF VARIATIONS.

Little is known in regard to the origins of variations, but they are generally supposed to result from changes in the germinal matter, either before or during fertilisation. Weismann in alluding to the discovery that each ovum and spermatozoon loses half its chromosomes, and that the fertilised ovum thus contains only a portion of the elements of each, explains variation by suggesting that there is a germinal selection of parental characteristics, and that therefore the new individual may vary from either of his parents. Professor Pearson, on the other hand, holds that variability is not in any sense a product of sexual or bi-parental inheritance; while Archdale Reid goes further, and brings forward evidence to prove that bi-parental reproduction, instead of predisposing to variability, tends to prevent useless variations, and so contributes to the stability of the species. This observer is of opinion that variations are undeniably due to an inborn tendency to vary, which is inherent in the germ plasma of every species of plant and animal, and which is thus an important factor in evolution.

As we come to examine observed differences between individuals and their parents, we discern, as Professor Arthur Thomson states, that many structural peculiarities of the body, can be shown

by experiment to be definitely related to some alteration or peculiarity in external environment. This brings us to the great question of the *transmissibility of acquired characters*, than which no subject in connection with heredity has given rise to so much controversy.

The question at issue is as to whether the modifications of the body can so specifically affect the reproductive cells that the next generation will inherit, in some measure at least, the altered characters acquired by the parent or parents. Darwin, Hæckel, and Virchow were all strong supporters of the theory of external causes generating effects which are inherited. Weismann on the other hand, at one time denied all inheritance of acquired characters, and thought that the sole fountain of specific change is to be found in the intermingled nuclear plasma of the sex cells. Weismann himself, however, has since admitted that the environment, and more particularly altered nutritive conditions in the body, may cause variations in the germ-plasma, and so alter its constitution that an organism may be produced which is in some respects different from its parents. If this much is granted, then the transmissibility of acquired characters, including the tendency to diseased states, at once becomes possible and even probable. If nutritive vacillations, as Weismann admits, can produce ever so little modification in the germ-plasm, it is easy to conceive that the nuclear plasma cannot remain absolutely unaffected by the physico-chemical conditions of the body (soma).

Let us now consider some of the special acquired conditions which are believed to be hereditary. There is no evidence of the supposed transmission of *mutilations*; the Jews have been circumcised since the days of Abraham, and yet their sons are born with similar foreskins to those of other races. The long continued compression of the feet of Chinese ladies has not resulted in any hereditary change in the feet of Chinese babies. Sir Herman Weber, who has carefully studied the question of *longevity*, is strongly of opinion that heredity exercises a potent influence upon the duration of life. He states that those whose parents and ancestors were long-lived may expect to live longer than the descendants of comparatively short-lived ancestors. The tendency to premature senile degeneration is undoubtedly inherited by certain families. In many of these cases what is actually inherited is a tendency to early vascular degeneration, which may in turn be due to an inherited faulty metabolism. It is a well-known aphorism that a man is as "old as his arteries." Early arterial degeneration predisposes to the occurrence of cardiac degeneration and cerebral hæmorrhage. Dr. Savage mentions the fact that senile mental changes also not infrequently recur in families, and states that he has known a good many instances in which members of certain families died first in their brains.

We will next take up *seriatim* some of the best-known examples of so-called hereditary diseases, with the view of critically examining their claim to be considered as coming under such a category.

(To be concluded.)

MEDICINE.

AEROPHAGY AND FLATULENT DYSPEPSIA.

AEROPHAGY, or the swallowing of air, is undoubtedly at the root of certain cases of flatulent dyspepsia, and if the habit of air-swallowing can be broken the dyspeptic symptoms are relieved at once in a way that cannot be brought about by the use of drugs and dietaries.

There are two clinical groups of air-swallowers, the involuntary and the voluntary. In the involuntary form the condition manifests itself by veritable crises of eructations of wind lasting more or less long, recurring more or less frequently, yet capable neither of being evoked at will, nor stopped, nor moderated. It is commoner in patients of nervous temperament, a convulsive manifestation analogous to hysterical hiccough or to nervous cough, without any direct relation to gastric disorders. It is not of this type that we would speak here. In the second form the air-swallowing is under the control of the will. It is to be observed in neurotic gastropaths who have developed the habit, performing the act repeatedly and intentionally in the idea of relieving certain gastric sensations in this way. A great deal of flatulent dyspepsia and of the abundant belching of wind, sometimes almost at will, are due to this cause.

The following account is based on a case recorded very fully by Soupault. The patient was a man aged 42, who sought medical advice about flatulent dyspeptic symptoms that had been troubling him for over three years. He had never had any major illness except syphilis at 20, which had been cured without trouble. His general condition was satisfactory except for a drawn aspect about his face. He stated that he had decreased in weight to the extent of over a stone in three years. None of the stigmata of neurosis nor of neurasthenia were to be noted though the man was a little tired.

When questioned in detail, it turned out that although the gastric symptoms had been more noticeable during the last three years, they had really started ten years ago. No adequate cause for their commencement could be stated, though the patient admitted that he had more than once taken alcohol to excess, and that he was in the habit of taking potassium iodide from time to time. The first gastric symptoms were a sense of weight rather than of actual pain during digestion, and slight regurgitations and repeatings; even these slight symptoms were not always present. They were produced, as a rule, whenever he exceeded in his dietary, or when he was physically or mentally fatigued. During the last three years there had been an almost sudden increase in the symptoms. After a brisk purge one day violent epigastric pains and discomfort set in, and from that moment the flatulent syndrome appeared and persisted.

On admission he was a constant sufferer from a feeling of weight and discomfort in the epigastrium, notably augmented immediately after a meal, but without any actual acute pain, colic, or burning sensation. After eating, the stomach became blown

up. A little later the heart was apt to palpitate, and the patient suffered from hot flushes over his body and a feeling of being intellectually torpid. Appetite was none the less excellent; the patient used to eat plenty, and he looked well enough nourished. The other, and, indeed, the main, symptom was the extraordinary flatulence. Belching of wind occurred all day long: on waking in the morning, during the day, both before and after meals, on going to bed, and even when he was awakened from any cause during the night. During actual sleep there were no belchings.

The eructations of wind were always produced in the same way. First of all the patient closed his mouth hermetically, then, making a series of combined movements with the muscles of the mouth, the palate, and the pharynx, he drew in through his nostrils a quantity of air, which he forthwith swallowed and compelled to go into his stomach with a peculiar sound. Six or eight of these movements would be made in rapid succession. Inspection of the epigastric region enabled one to see the stomach swelling progressively until it became so distended that its outlines could be clearly seen. After a certain number of the air-swallowing acts the patient opened his mouth, and the stomach contractions forced out some of the air, giving rise to a loud belch. For the moment there was relief to the abdominal symptoms, but shortly afterwards the air-swallowing would be repeated, and then there would be further belchings, and so on.

It was easy to make certain that the air was forced into the oesophagus by a veritable act of deglutition; in other words that the case was one of aerophagy. Auscultation of the oesophagus through the spine behind, and of the stomach through the epigastrium, allowed of the downward movement of the air being easily followed. Moreover—and this constitutes the essential point in the treatment of these cases—by placing a cork or other suitable body between the teeth so as to prevent deglutition, both flatulence and belching ceased forthwith.

It is needless to go into this case in greater detail here. So extreme a degree of flatulence from aerophagy is doubtless rare, but minor degrees, if watched for, are found to be comparatively common. Aubert has pointed this out, remarking at the same time that numbers of persons who are not really flatulent, and even not dyspeptic, intuitively swallow air to assist their eructations. It is the exaggeration of this phenomenon that gives rise to the clinical picture of flatulent dyspepsia. The amount of gas brought up varies from a pint at a time down to quite small volumes. The explanation of this is simple enough. Different patients suffering from flatulent dyspepsia swallow air with very different degrees of avidity. Some make as many as five, six, or more repeated movements of deglutition, distending their stomachs to a marked degree before allowing the gas to escape. Others

make only two or three swallowings between each eructation. Others again only one. The intensity, the violence of the movements are not always identical; hence the amount of gas brought back also varies considerably. It even happens sometimes that the air ingested is so small in amount that it does not go down so far as the stomach, and there arises a condition of simple cesophageal eructation. Even though the aerophagy is primarily voluntary, it often takes place quite unconsciously after a while, the constant repetition of the act having created a sort of habit.

When patients are closely questioned, it appears that they have suffered from some degree of dyspepsia before flatulence develops. The eructations of gas are seldom, if ever, a phenomenon of the onset of dyspepsia. Conversely, many patients swallow air and can eructate it at will without suffering from any dyspeptic symptoms at all. As a rule the aerophagy of dyspeptic cases is worst after food. A meal produces uncomfortable epigastric sensations, and these in turn provoke the swallowing of air. Flatulence results. According to the type of the primary dyspepsia the flatulence reaches its maximum either shortly after the meal or a long time after it, or even after only a few mouthfuls of

food have been eaten. Everything that tends to aggravate the dyspepsia also, broadly speaking, increases the aerophagy, and consequently the flatulence. Physical fatigue may do so in some cases, emotional disturbances in others, or indiscretions of any kind.

If this be the pathology of the flatulence in a given case, it is clear that the giving of antiseptic remedies is not likely to relieve it. Antiseptic drugs are prescribed with the idea of inhibiting the production of gas by fermentative micro-organisms. If the gas is derived from the air by a process of swallowing, it is clear that some other line of treatment is required. There are, of course, many cases of flatulence from fermentative changes in the gastric contents besides those due to aerophagy; but when the trouble is due to the latter, neither carminatives, acids, nor alkalies are likely to do half so much good as is the prevention of aerophagy. Many patients can cure themselves of the habit very quickly when its nature is pointed out to them; it may be a great assistance to them if they carry with them a cork or other similar body that they can place between their teeth whenever they catch themselves in the act of swallowing air, so as to prevent the continuance of the aerophagy.

EXAMINATION OF THE PUPILS.—II.

Inequality of the pupils.—The next point to observe is whether or not the two pupils are of the same size. In making this observation it is very important indeed that the patient's face should be symmetrically placed as regards the light. Should there be inequality, its degree should be noted as accurately as possible, and here again measurements of the pupils made in the way already described are very desirable. Besides the degree of inequality its persistence or the reverse at successive examinations may also be important.

Slight differences in size between the two pupils are common in perfectly healthy persons. Indeed, it has even been stated that it is rare to find the two of absolutely the same diameter. The natural difference, however, is, as a rule, too slight to attract attention unless very careful investigations are being made. It is true that now and again one sees individuals in whom a more marked difference in the sizes of the two pupils appears to be constant, but as a rule any considerable difference between the two is a symptom of pathological significance.

There are two nerves controlling the movements of the iris, the third cranial nerve and the cervical sympathetic. Excitation of the former causes the pupil to contract; of the latter to dilate. Reversely paralysis of the third cranial nerve leads to dilatation of the pupil, whilst paralysis of the cervical sympathetic results in the pupil of the same side being unduly small. If, therefore, one pupil is markedly smaller than the right, the first thing to determine is which of the two is the abnormal one; this will probably be decided by watching the reactions of each to light and to accommodation, the more mobile pupil being the normal one. If it turns out that the smaller pupil is the abnormal

one, the cause of its smallness may be either paralysis of the cervical sympathetic or irritation of the third cranial nerve. Now the effects of an irritant lesion vary, as a rule, from hour to hour and day to day, whereas those of a paralytic lesion are more constant; if, therefore, the degree of inequality of the pupils is one that varies considerably within short spaces of time, irritation is more likely than paralysis, and this is often of considerable help in arriving at a diagnosis.

The four main possibilities are:—

(1) That the left pupil is larger than the right and is the abnormal one: this may be due to paralysis of the pupillary fibres of the left third cranial nerve or to irritation of the left cervical sympathetic. If the third nerve is partly paralysed, it is unlikely that the pupillary fibres alone will be affected, and one would expect paresis of the ciliary muscle or of one or other of the external muscles of the eye-ball. If the cervical sympathetic is irritated, not only will the pupil of that side be enlarged, but there will also be a tendency to undue flushing, heat, and perspiration on that side of the face and possibly a slight widening of the palpebral fissure.

(2) That the left pupil is smaller than the right and is the abnormal one: this may be due to irritation of the left third cranial nerve or to paralysis of the left cervical sympathetic. In the latter case there will be not increased but defective blushing and defective sweating power on the left side of the face, and ptosis of the left upper eyelid.

(3) That the right pupil is the larger and is the abnormal one: the appearances will be similar to those of (2), but the causes will be transposed—that is to say, the condition will be caused by paralysis

of the pupillary fibres of the right third cranial nerve or by irritation of the right cervical sympathetic.

(4) That the right pupil is the smaller and is the abnormal one: the cause may be either irritation of the right third cranial nerve or paralysis of the right cervical sympathetic. In the latter case the patient will also have ptosis and defective sweating and blushing power on the right side.

As regards the causes of the irritations or paralyses, as a rule the same lesion is responsible for irritation in an earlier stage and for paralysis in a later. For instance, an aortic aneurysm may be interfering with the left cervical sympathetic; if the case is watched carefully for a long period, it may be noted that, whereas at first the left pupil is constantly larger than the right, later on it is as constantly the smaller of the two. At first the cervical sympathetic is being irritated by the aneurysm; as time goes on the pressure upon the nerve destroys it entirely, allowing uncontrolled action of the third nerve.

Many things may interfere with the cervical sympathetic and cause unequal pupils. It must suffice to enumerate the chief of them—namely, aortic aneurysm; innominate aneurysm; apical fibrosis of lung and pleura; enlargement of the lowest cervical or upper mediastinal glands from inflammation, tubercle, carcinoma secondary to tongue, pharynx, œsophagus, or larynx; sarcoma or Hodgkin's disease; deep scars in the neck; blows; fractures of the first rib; an accessory rib; mediastinal tumours; caries of upper dorsal vertebræ; secondary deposits of growth in the vertebræ; pachymeningitis of the cilio-spinal region of the cord; and degenerative lesions in the grey matter of the cord itself, allied to progressive muscular atrophy or amyotrophic lateral sclerosis. In addition it must be remembered that reflex dilatation of the pupil of the same side readily follows painful stimulation of the skin of the neck by pinching, and precisely similar dilatation may be caused by painful lesions, such as acute cervical

adenitis from pediculosis capitis, acute earache, from mastoiditis, or even from a severe boil upon the neck.

A unilateral lesion of the third nerve or of its nucleus is due more often to syphilis than to any other single cause. Rarer affections are direct implication of the nerve in an orbital or intracranial growth, a tumour other than a gumma of the nerve itself, or pressure of a small aneurysm. None of these, however, are such common causes of inequality of the pupils as are vascular conditions which interfere with the function but not with the structure of the nerve. A very well known example of this is traumatic compression of one side of the brain. At first the pupil upon the same side as the injury contracts, the other remaining normal; in an hour or two the pupil upon the sound side begins to contract too, whilst that on the affected side begins to dilate again until a stage of equal pupils is reached once more; in another hour or two the pupil upon the injured side is widely dilated, whilst that on the healthy side is contracted. Finally a stage is reached in which the pupil of the sound side enlarges too, and both pupils are widely and equally dilated. It depends, therefore, upon the length of time that has elapsed since the sudden traumatic compression of one side of the brain occurred what the state of the pupils will be.

Compression of one side of the brain which has come on gradually, so that there has been ample time for readjustment of the blood supply to the two sides, does not lead to inequality of the pupils. Any sudden interference with the blood supply of one side may cause pupillary changes similar to those observed in cases of traumatic compression—for instance, cerebral hæmorrhage or cerebral embolism.

Finally, in some elderly patients there is such a degree of atheroma of the vessels of the circle of Willis, and such an unequal distribution* of this atheroma upon the two sides, that there is a permanent lack of symmetry in the cerebral circulation and a permanent inequality in the pupils.

CARRIÈRE'S "HESITATING PULSE" IN PNEUMONIA.

THE different characters that the pulse may present in ordinary lobar pneumonia, and the prognostic value of each type, have been much discussed. Very rightly have the frequency of the pulse, its rhythm, its volume and force, its diastole, and its tension all been insisted upon as important. Dr. Carrière lays particular stress upon one additional feature not often referred to in the books, and termed by him the "hesitating" character of the pulse. The epithet almost explains itself. In a case in which the pulse "hesitates" it seems as if the heart wavered at the time of ejecting its contents into the arterial system, and this wavering or hesitation can be readily felt by the finger and seen upon sphygmographic tracings. To the finger the radial artery, instead of becoming distended briskly after the commencement of the pulse-wave, becomes raised progressively and

slowly, as though regretfully and with great effort. Precisely the same slowness in attaining the maximum systolic elevation is quite obvious in graphic records of the pulse. In a normal sphygmogram the ascending line is not quite vertical, but very nearly so. In cases of pulse "hesitancy," on the contrary, the ascending line is quite oblique. It is not a very common phenomenon fortunately, for it is of bad prognostic significance. Dr. Carrière met with it in six out of 28 cases of severe pneumonia. Of these six patients, five died. The phenomenon is best marked in the afternoon and evening from 3 to 6 P.M. It may occur by the fourth day of the disease; Dr. Carrière has not observed it before the fourth day, and it may not appear until the sixth day or later. It usually coincides with a minimum arterial tension. In the fatal cases there was always segmentary myocarditis.

SURGERY.

OPERATIONS UPON ARTERIES.

WITHIN the past few years the attention of surgeons generally, and particularly of those in America, has been directed to the subject of operations upon arteries, and the result has been such an improvement in technique that other procedures besides mere ligation are at any rate possible, even if they are not always advisable. Like all new work, this successful result has been a gradual evolution, the outcome of empiricism. The best known of the earlier methods advocated for the end-to-end union of arteries was Murphy's. In this the proximal end of the cut artery was invaginated into the distal, and the edges of the distal end united to the two outer coats as they lay in apposition. Experience showed, however, that the projecting proximal end allowed fibrin ferment to escape into the circulation, and thrombosis followed, a result which rendered the operation impracticable. It was next proposed to unite the divided ends by sutures which did not penetrate the lumen of the vessel. With this object sutures were used which passed only through the outer and middle coats, but it was found that this more often than not gave rise to a dissecting aneurysm, the stream of blood passing down underneath the ununited inner coat and stripping it up from the tunica media. But recently it has been shown that it is possible to unite an artery safely and securely by means of an accurately adjusted continuous mattress suture which passes through all the coats; the edges are slightly everted so that when the suture is tightened up and tied no part of it projects into the lumen of the vessel, and leakage does not occur. A second continuous suture over all, uniting the edges, may be inserted for greater security, but this is not absolutely necessary. This operation has now been performed for wounds of large arterial trunks, for the removal of an embolus, and for reversing the circulation in the limb in cases of incipient gangrene. But it will be readily understood that the indications for its use are somewhat circumscribed.

A still further advance in the surgery of the arterial system has been made in the operation of endoaneurysmorrhaphy, which has been devised by Dr. Matas, of New Orleans, for the treatment of aneurysms. Strictly speaking, he has described two separate methods of operating on an aneurysm from the interior of the sac. The first he calls the "restorative." In this, which is only applicable to sacculated aneurysms, the connection of the aneurysm with the lumen of the vessel is obliterated, while the continuity of the vessel itself is not interfered with. The second he calls the "obliterative"; and he reserves this for fusiform aneurysms, in which the whole circumference of the vessel is involved in the pathological process.

To ensure a successful result every detail of the technique must be carefully considered. The first, and perhaps most essential, point is to compress all the arterial trunks communicating with the aneurysm, so as to secure what he calls an ischæmic operation field. This is done by clamping the vessels

with special clamps whose blades are covered with indiarubber, like gastro-jejunostomy clamps, and are approximated with a screw. The best pattern is that known as Crile's. It is necessary to secure in this way not only the parent vessel as it leads into and away from the aneurysm, but also any tributary vessels which pour their stream into the aneurysm at some intermediate point. Otherwise when the sac is opened troublesome hæmorrhage is likely to obscure the field of operation.

Secondly, the connections of the aneurysm should not be needlessly disturbed, but an incision made down on to it, important structures being alone retracted. The sac of the aneurysm is then opened by a straight incision parallel to the long axis of the vessel, or, if more exposure is desired, two elliptical incisions may be made in the sac, and the intervening portion of the sac wall removed, an oval window thus being formed.

When the interior of the aneurysm is exposed the subsequent steps depend upon the conditions found. In the case of a sacculated aneurysm there is only one opening between the vessel and the sac. This can be closed by sutures in such a way as to shut off the aneurysm completely without interfering with the lumen of the vessel. The method is as follows: The sutures used should be of chromicised gut; these are sufficiently resistant to secure permanent approximation of the edges, but are eventually absorbed. They are passed with a fine, fully-curved, rounded needle on a needle holder, starting from a point well outside the edges of the aperture and being brought out at its margin. It is better to use interrupted sutures, and they should be about an eighth of an inch from each other.

In dealing with a fusiform aneurysm it is impossible to retain a pervious vessel, and in this case the sutures are passed as before, but with this difference, that they are not brought at the margin of the aperture, but pick up the floor of the vessel as it enters the sac; so that when the sutures are tied the orifice of the vessel is obliterated. Every vessel entering the sac must be treated in this way.

The subsequent measures are the same in either case. The sac wall may be doubled on itself or its outer wall may be cut away entirely. Whichever of these alternatives is adopted, deep sutures are passed by which the remains of the sac are sutured to the overlying skin.

Up to the present time, roughly, 100 of these operations have been performed, mostly in America, with a mortality of 9 per cent.

Dr. Matas, to whose ingenuity we owe these procedures, is strongly convinced that they are in advance of the methods hitherto practised. But until one has further experience of the success and applicability of the method, it is not easy to share his enthusiasm, however much one may admire his courage and ability. The technique is complicated, and needs special experience, and the percentage of successful cases is therefore not likely to be high, except in the hands of a more than usually skilled operator.

Moreover, in small aneurysms in the distal parts of the limbs, excision of the sac after ligation of the parent stem is a highly satisfactory proceeding, and we cannot see that Dr. Matas's obliterative method is any advance on this. The restorative operation has, it is true, the advantage of leaving the lumen of the vessel patent; but then the collateral circulation is almost always opened up with astonishing rapidity

after ligation of a vessel, so that here the advantage is more apparent than real. But that there is a future for the operation there can be no reasonable room for doubt, though its field of usefulness will probably be narrow—i.e., for sacculated aneurysms of large trunks, such as the aorta—in which ligation of the proximal stem is either impossible or inadvisable.

DERMATOLOGY.

CHRONIC INFLAMMATORY AFFECTIONS OF THE PALMS AND SOLES.

HYPERKERATOSIS, or hypertrophy of the horny layers of the epidermis of the palms and soles is seen sometimes as a congenital malady, affecting generally several members of one family or of several generations of a family. Palmar and plantar hyperkeratosis is also a manifestation of chronic arsenical poisoning, such as may occur when arsenic is given in medicinal doses over long periods. It is part, too, of the rare eruption known as pityriasis rubra pilaris. In each of these conditions the hypertrophy of the horny layers is the main feature, and the whole of the palmar or plantar surface is involved.

In the affections which we are now about to consider, the thickening of the epidermis and the scaling are due, not to a simple hyperkeratosis, but to an active but imperfect cornification—parakeratosis—the result of an inflammatory condition in the deeper parts of the epidermis and the derma. The lesions are generally limited to a part only of the area of the palms or soles, and they may affect the palms only, or the soles only, or one palm or one sole. There are three common skin diseases which may produce eruptions of this nature on the palms and soles, namely, eczema, syphilis, and psoriasis. Each of these diseases, when affecting these regions, is liable to lose its characteristic features, owing to the different anatomical conditions of the skin of these parts, and to give rise to similar circumscribed areas whose main features are inflammatory redness, the formation of thick scales, and fissuring of the parts affected. For this reason there is often considerable difficulty in distinguishing them from one another, and one may frequently have to rely upon other evidence than that given by the actual lesion, such as, particularly, the presence of a more typical eruption of eczema, of syphilis, or of psoriasis on other parts of the body. If these are present the diagnosis is easy; if they are not, a very careful examination may be required. For the sake of treatment an accurate diagnosis, especially between syphilitic and non-syphilitic eruptions, is most important.

In eczema of the palms and soles the same pathological processes go on as in eczema elsewhere, but, owing to the thickness of the horny layers, the serous exudation cannot easily break through, and consequently it soddens the horny layers and separates them from the deeper epidermal layers in the form of largish scales. There is thus produced a circumscribed patch, which shows red where the

inflamed cedematous tissues are partially denuded of horny layers, and which elsewhere is covered by thickened loosely adherent scales. Generally the red cedematous epidermis becomes deeply fissured down to the inflamed derma. Often, on careful examination of the skin beyond the main scaly patch, one can observe little collections of tiny deep-seated vesicles beneath the horny layers, and this appearance at once gives the clue to eczema. There is also intense itching, and the eruption is generally symmetrical, affecting both palms or both soles.

Syphilis of the palms and soles may occur as part of a general secondary papular or papulo-squamous eruption, where some of the flat papules have happened to appear on the palms or soles, and these produced scaly circumscribed patches. But the more important type, and that which needs to be distinguished from eczema, is a later manifestation, and what is known as a "recurrent secondary," or a tertiary lesion. As in eczema of the palms or soles, there is the same sharply circumscribed, red, scaly patch. But there are these differences: at the margin of the patch there is generally a more or less marked infiltration of the deeper tissues, sometimes actually nodular, sometimes only made out on careful examination; the whole condition is usually less acutely inflammatory, more indolent, and of a dull coppery hue rather than a bright red; there are no outlying deep-seated pin-head sized vesicles; the patches do not itch; they are often confined to one palm or to one sole. Another important fact is that these palmar and plantar syphilides are very frequently associated with syphilitic leucoplakia of the tongue, if the patient be a man who smokes. These syphilides are often very obstinate to treatment, and do not yield to the ordinary internal medication and local applications. Especially when associated with leucoplakia of the tongue, they are suitable cases for intra-muscular injections of grey-oil, under which treatment they do very well.

Psoriasis of the palms and soles is not uncommon in association with a general outbreak of psoriasis, and then its diagnosis is easy. Very rarely, however, it may occur without other parts being affected, and then it may be difficult to distinguish from eczema and from syphilis. The main difference is that in psoriasis the scales are more abundant and heaped up uniformly over the whole patch, not here and there detached to expose the inflamed epidermis as in the two latter eruptions. The scales, too, have the characteristic silvery aspect.

OBSTETRICS.

THE VALUE OF ABDOMINAL PALPATION IN LABOUR.—I.

MUCH has been written in the last decade of the great value of the external abdominal method of investigation in the diagnosis of presentations in labour, and its real value is appreciated by all who practise it. It is true, however, that outside of the lying-in hospitals and charities it is not used to any great extent, even by men who have been carefully taught to practise it in their student days. The reason for this is clear: abdominal palpation is difficult at first, and unless every opportunity of practising it is embraced, the difficulties are not overcome, and its true value and importance are not grasped. It may be that some patients object to it because they do not expect to be examined in that manner. Such objections, however, can be easily overcome by any man who starts by obtaining the complete confidence of his patient.

Unfortunately the habit of attempting to diagnose presentations by vaginal examinations alone not only is fallacious and leads to absolutely erroneous diagnoses sometimes, but is dangerous to the patient on other grounds. The more vaginal examinations during labour, the greater is the risk of introducing septic material from without; and in a case where there is any difficulty in making out the presentation many vaginal examinations will probably be made as long as any doubt remains. There can be no reasonable doubt that the comparatively high mortality and higher still morbidity in lying-in women in private practice compared with that in hospital practice is, at least in part, due to the number of vaginal examinations made during labour. Further, and not less important, the vaginal method leads not infrequently to erroneous diagnoses, and consequently to difficulties in treatment which might well have been foreseen and avoided. It cannot be said that abdominal examination will obviate all difficulties in diagnosis or prevent all puerperal sepsis; but it will do away with many of the former and prevent much of the latter. It can be said with absolute certainty that the position of the child and the exact presentation can be made out by abdominal palpation alone in practically all cases except those in which the face and brow present. This must not be taken to mean that a face presentation cannot be made out from above; it very often can, but not always.

The method of carrying out abdominal palpation is simple enough if two chief points are remembered—namely, that it is required to locate the head of the foetus and to find to which side its back points. First, to locate the head: stand by the side of the patient, who, of course, lies on her back; place the hands on either side of the uterus, with the fingers pointing towards the pubes; then clip the fingers behind the symphysis, and in a vertex presentation the hard rounded head will be felt. In a primipara the head feels as if it filled the pelvis, and is usually quite low down, the greatest bulk of it being already through the brim. In a multipara the head is higher up, and may not have engaged

at all. Finding that the head presents *and fills the pelvis*, a vertex presentation is certain, and it only requires now to find out which. The position of the back and limbs will be the guide to this. Starting with the hands as placed originally, they should be drawn upwards so as to grasp the greatest bulk of the uterus between them, and then by pressing alternately one side and the other the great resistance of the back will be felt, or the small parts (*i.e.* legs and arms) will become apparent. In anterior positions of the occiput the back is easy to locate, but in posterior positions it may not be felt at all, in which case the anterior shoulder and side of the foetus must be made out. One shoulder will always be more easy to feel than the other; in fact, the posterior one can never be felt abdominally. Of the posterior positions of the vertex the right is said to occur twenty times to once of the left in every hundred vertex cases. After this, then, is it necessary to make a vaginal examination at all? Certainly not for presentation diagnostic purposes; but in the first stage it may be necessary to gauge the dilatation of the cervix and the integrity of the membranes. Unless, then, there is some other urgent reason, one, or at the most two, vaginal examinations should be the limit in an uncomplicated vertex case.

When, on making the first abdominal palpation, the vertex is not found in the lower uterine segment, the next movement must be to find out if it is near the fundus or lying near the iliac fossa. To find the head at the fundus the finger-tips of the examiner should be turned towards the fundus and the hands spread out at the sides of the uterus as before. The head at the fundus is usually to one side or the other of it, not exactly in the middle. It is easily recognised from its hardness, its shape, and its mobility, the latter perhaps being the great diagnostic point between the head and the breech. The breech cannot be moved or "ballotted" on the trunk, the head can. Finding this, the position must be pelvic, and it makes very little difference whether the actual presentation is a complete breech, footling, or knee. If the head cannot be found at the fundus, then it must lie nearer the side of the uterus, and will usually be found pointing towards one or other iliac fossa.

As far as errors of diagnosis go, perhaps the greatest is to mistake a breech for a face presentation, and yet this has occurred sufficiently often when vaginal examinations only are made. Such a mistake ought to be impossible if the abdominal method is practised. The commonest mistake is to overlook an occipito-posterior position of the vertex, and this mistake is the one of all others which leads to prolonged labour, severe maternal injuries, and is perhaps the commonest cause of intrapartum death of the infant. An occipito-posterior position cannot be overlooked if abdominal palpation is properly carried out. Two conditions make abdominal palpation difficult, and may make it impossible—namely, great obesity and hydramnios.

OPHTHALMOLOGY.

OPHTHALMIC MANIFESTATIONS OF SYPHILIS.

IRITIS, or irido-cyclitis, is the most frequent syphilitic lesion within the eye during the acute stage; choroditis, or retino-choroiditis the most frequent chronic inflammation from the same cause. The large majority of cases of iritis met with are due to syphilis, that is, of primary iritis, not due to trauma. It is an early secondary manifestation—one of the earliest—and is invariably accompanied by cyclitis. The eye becomes red and uncomfortable, with ciliary injection, hazy anterior chamber due to exudation in the aqueous; there is a muddy appearance of the iris, which loses its brilliancy and becomes very sluggish in its reactions. Later a yellowish nodule may develop in the iris tissue in one of two situations, either at the attached margin in the angle of the anterior chamber, or at the free pupillary margin. Nodules which appear within the width of the iris are rarely syphilitic. The iritis which very often appears during the tertiary stage of the disease is not usually accompanied by these nodules, but at times nodules develop which must be looked upon as gummatous. Syphilitic iritis also occurs in intra-uterine life, and a child is occasionally born with posterior synechiæ and a bound-down pupil. Nodules in the iris are due either to syphilis, in which case they disappear rapidly under a course of mercurial inunction, to tubercle, or to sarcoma. In clearing up they may leave no scar, or that portion of the iris occupied by them may become atrophic and very thin.

Iritis occurs in hereditary syphilis, almost invariably accompanied by interstitial keratitis. It is extremely rare to come across a case of interstitial keratitis without iritis accompanying it, though the latter is sometimes impossible to diagnose owing to the haze of the cornea. This form of iritis occurs in children from three to thirteen years of age, the ordinary specific iritis in adults, and the form occurring as a tertiary manifestation from thirty-five upwards. If a patient above forty develops specific iritis he will probably die of some syphilitic trouble.

Cyclitis occurs at times as a secondary manifestation, with but little if any affection of the iris, and patients then seek advice on account of greatly diminished vision. In such cases, frequently the only signs to be found are marked floating opacities in the vitreous, and keratitis punctata (K.P. so called) on the back of the cornea, with some tenderness on pressure over the ciliary body, and neuralgic pain, usually at night, round the orbit. This condition may continue for many months, and in the end, if not relieved, may give rise not only to total loss of vision but also to shrinking of the eyeball. Even if such a disastrous result does not happen, the lens may suffer in its nutrition, and quite early become cataractous, or the iris may become involved, get bound down, and glaucoma supervene, or the pupil become blocked by lymph. Very fine dust-like opacities in the vitreous—so fine as to be seen only with the direct method of using the ophthalmoscope and a plane mirror in place of the ordinary small concave mirror, together with a moderately high convex

lens—are diagnostic of syphilis, or of there having been specific cyclitis at some previous time. The vitreous cannot become inflamed from syphilis, but is chiefly affected by exudation into it from inflammations of the ciliary body and retina.

Inflammation of the retina occurs as a direct result of syphilis, sometimes congenital, but most usually acquired. Syphilitic retinitis is found in two forms, and as a rule is accompanied by inflammation of the choroid. The retina may lose its transparency and become hazy throughout its entire extent; the haziness is most marked in the neighbourhood of the optic nerve, since the retinal layers are thicker here than elsewhere; or circumscribed patches of haziness may appear which eventually become definite patches of exudation projecting into the vitreous, isolated from one another, and appearing in different parts of the retina, sometimes attacking the region of the macula only. The vitreous quite early becomes filled with opacities, rendering ophthalmoscopic examination difficult; but the exudations, if of large size, can usually be seen on account of the difference in colour, in spite of the vitreous haze. The more general diffuse form may continue for a very long time without any apparent alteration, but finally changes in the retinal pigment take place, and the whole retina becomes occupied by fine dotted pigment, which runs together until the appearance is similar to that known as retinitis pigmentosa. The circumscribed form finally settles into a whitish mass of connective tissue, with but little pigment round it, or the choroid having become involved, shows the distinctive features of choroiditis—a white punched-out centre surrounded by masses of dark brown or black pigment, the centre white part indicating where the choroid has atrophied and the glistening sclerotic shows through. Choroiditis is one of the most frequently observed intra-ocular inflammations caused by syphilis, and it is found also as a congenital defect in the subjects of the hereditary affection. Isolated patches are at times met with, but it is more usual for succeeding foci of inflammation to follow the first at varying intervals of time, until the usual clinical picture of disseminated choroiditis presents itself. The patches appear in the periphery first, and succeeding attacks bring others nearer to the central region, and sometimes directly to the macula, at once destroying central vision; though this order may not always be adhered to, it is not uncommon, and in other cases numbers of peripherally placed patches have been found in or near the macula, the result of previous inflammatory attacks. After interstitial keratitis with irido-cyclitis (when the cornea has cleared sufficiently to allow of ophthalmoscopic examination) patches of disseminated choroiditis are found dotted over the fundus.

The optic nerve is affected directly by syphilis, as in the primary optic atrophy of tabes; it also shares in retinal inflammation, and may atrophy after a severe attack of retinitis; neuritis or choked disc (so called) may result from intracranial gummata.

LARYNGOLOGY AND RHINOLOGY.

THE TREATMENT OF STENOSIS OF THE LARYNX AND TRACHEA.

OBSTRUCTION of the larynx and trachea is produced by so great a multiplicity of causes, from inflammatory swelling to the impaction of foreign bodies, that a complete discussion of the treatment is beyond the scope of this column. Indeed, it would be inconvenient to describe the treatment of neoplasms and of foreign bodies under this heading, and our remarks will only be directed to certain points.

In all forms of stenosis, when dyspnoea is severe and urgent the imperative indication is to relieve it by tracheotomy, laryngotomy, or intubation. Laryngotomy has the advantage that it can be very rapidly and easily performed, and is therefore a suitable procedure when suffocation is extreme and allows no time for any preparation; a knife only is required, and the wound can be kept open with a hairpin or any similar object. It is the operation of choice when the dyspnoea is due to the impaction of a foreign body in the larynx or to fracture of the thyroid cartilage, for the incision may, if necessary, be extended into a laryngo-fissure; it is also a very convenient method of opening the air-passage before any extensive operation about the mouth or pharynx. But it is unsuitable for young children, in whom the crico-thyroid space is too small, and it should never be performed when the tube is to be retained for more than a very few hours, for stenosis is then apt to follow. There has been much discussion as to the relative advantages of tracheotomy and intubation, which latter operation is practised more extensively abroad than in this country. Intubation is in general suited only to cases of temporary obstruction, and practically to cases of diphtheria; it is quite unsuitable for such forms of disease as are accompanied by deep ulceration and inflammation, such as perichondritis, tuberculosis, or active syphilis. It can, however, be successfully employed in the treatment of cicatricial stenosis. On account of the risk of the tube being coughed out, it should be used in diphtheria only when skilled attention is at hand; but, with this proviso, it is probably a safer method than tracheotomy in young children.

When dyspnoea is caused by œdema supervening in a case of acute laryngitis, perichondritis, etc., the necessity for tracheotomy may often be obviated by timely free scarification of the swollen aryteno-epiglottic folds. In children this is best done with a curved bistoury, protected nearly to the point with strapping, and guided by the left forefinger; in adults the operation is performed with a laryngeal lancet under inspection with the mirror. If tracheotomy is necessary it should be performed low down, as sub-glottic swelling may be present, and extend for some distance down the trachea. Rarely the swelling of the upper aperture in tuberculous laryngitis may produce dyspnoea; in such cases the patient nearly always sinks rapidly after tracheotomy, but this operation can be avoided by incision, or, better, by partial removal of the swollen tissues with punch-forceps. So also in laryngeal syphilis tracheotomy may be prevented if the patient be rapidly got under the in-

fluence of mercury by intramuscular injection; but here it is less important to avoid the operation, for tracheotomy appears to have a distinctly favourable effect on the laryngeal lesions. Difficulty in dispensing with the tube after tracheotomy in children, when due to definite stenosis, is usually the result of damage to the larynx at the time of the operation by making the incision too high, and must be treated as cicatricial stenosis of the larynx; but it is very often merely due to spasm from terror when the tube is taken out, and is then best treated by encouraging the patient to blow soap-bubbles or sound a whistle, using a fenestrated tube, and later stopping the outer opening; sometimes it suffices to remove the tube as though to change it, and to tie only the shield on to the neck. Of a very common cause of tracheal stenosis, pressure by a goitre, it may be said here that tracheotomy should be avoided if possible, as it renders a subsequent operation much more difficult, and makes strict asepsis impossible; a cyst may be tapped or an adenoma shelled out, and in a case of parenchymatous goitre the dyspnoea may often be relieved by dividing the isthmus; but it is best to remove the goitre before the dyspnoea has become dangerously severe. In cases of bilateral abductor paralysis of the cords, an urgent attack of suffocation may come on at any time, and therefore a tracheotomy tube should be permanently worn; it may be closed with a plug, to be removed at night and whenever there is dyspnoea.

It may be said at once that the treatment of cicatricial stenosis is always troublesome and tedious, and demands much ingenuity from the surgeon and much patience from the patient. As in the first instance, tracheotomy is often required, attempts have been made to dilate the stricture from below by means of an attachment fixed to the tube; but these are seldom satisfactory; they are painful, difficult to bear, and apt to produce pressure ulceration. It is generally better to dilate from above. In the first place the stricture must first be thoroughly divided; this is done under cocaine with a Whistler's guarded knife, or, better, at any rate in expert hands, with a probe-pointed laryngeal bistoury, which is introduced below the stricture, and made to cut upwards well into the anterior commissure. Dilatation is kept up by means of Schrötter's bougies, or by intubation tubes. The former are curved hollow vulcanite bougies, triangular in section to fit the glottis; they can be kept in only for a few minutes at a time, and are passed daily, proceeding gradually to larger sizes. After dilatation is complete they are introduced at lengthening intervals, the entire treatment lasting for many months. Intubation tubes are used in the same way, but can be left in for a longer time, even up to twenty-four hours. The thread should be left attached to facilitate removal and to prevent the tube falling into the trachea as the stricture dilates. When the obstruction is very massive it may be advisable to perform thyrotomy, and cut away the scar-tissue,

but dilatation will have to be continued afterwards. These cases are most intractable, and should be kept under observation, and, if necessary, dilated at intervals, for several years. In the worst cases "laryngostomy" is recommended, *i.e.* performing thyrotomy, excising the stricture, keeping the wound open and carefully packed for two or three months, and finally closing it by a plastic operation.

Stenosis of the lower part of the trachea, usually syphilitic, is most difficult to treat; as it must otherwise terminate fatally, every effort must be made. The stricture should be dilated through a tracheotomy wound with hollow bougies, and it may now be incised and dilated under direct inspection through the tracheoscope. The only alternative is to use a long flexible cannula after low tracheotomy.

THE PRACTITIONERS' RELAXATIONS.

A MODEL RAILWAY SYSTEM.

THERE must be very few boys who do not, at some period or other, take a delight in models, and this delight often remains throughout life. The youngster spends his days on the nursery floor with his toy engines, his boats, and his leaden soldiers. His first engine is doubtless a wooden one, whose motive power is transmitted from its owner through a piece of string. A stage in the advance is shown in the purchase of a small clockwork locomotive, with perhaps a circle of tin rails for it to pursue its brief career on. Then, if the interest in things mechanical is still maintained as the youngster's age gets near double figures, and he is importunate on the subject, the parents may succumb to the "summation of stimuli" and buy a "real steam engine." This at first is carefully kept in its box all day till father comes home. Father is not allowed to sit long after his dinner, the cloth is hurriedly cleared away, and "poor father" is soon hard at work, with one eye on the pressure gauge and the other on the boy.

The next stage is marked by the boy being allowed to raise steam for himself without parental supervision, and from that time his progress in the model line is rapid and is only controlled by the depth of the parental purse and to some extent by the amount of interest "father" himself exhibits in models. A delight in models is often seen in adults whose calling is far removed from anything of a mechanical nature. I have often noticed this in the pages of "The Model Engineer," where I have seen descriptions of scale model locomotives made by a hotel servant, a plumber, an architect's draughtsman, and a sergeant in the Marines; a fine model engine and boiler made out of scrap metal by a mason's labourer; a splendid model traction engine constructed by a bricklayer; and a model sailing yacht made by a blacksmith.

Our own profession is not such an unmechanical one as some I have mentioned. A surgeon is trained to use many and various instruments with accuracy of eye and delicacy of touch, so that, given the interest, a surgeon ought to be a good model-maker.

One of the finest model locomotives ever made is the scale model of the L. B. and S. C. R. locomotive "Como," constructed by a member of the medical profession, while two brothers, also medical men, made, some ten years ago, a most interesting miniature representation of the L. B. and S. C. R. system from London Bridge and Victoria down to Croydon. Their locomotives were of clockwork.

My own particular hobby lies in the same direction.

For the last two years I have occupied my spare time in constructing a model railway in a large spare room upstairs. The line is supported on trestles round the room, and at first the rails were of tin and the locomotives were steam ones. These necessitated a considerable amount of running after to stop when required, to say nothing of burnt fingers or the danger of a flare-up when an accident happened and the loco upset. So the steam locomotives and tin rail were done away with. Now the track is equipped with proper scale model brass rail with wooden sleepers, chairs, and keys, while the locomotives, which look exactly like steam ones, are really electric. They can be controlled entirely from the signal-box, and all starting, stopping, reversing, and shunting can now be done without leaving the control levers.

Certainly from a model-making point of view the construction of a model railway offers the greatest diversity of work to the model-maker. First, he is a surveyor, marking out the garden or the room for the future line, and planning the railway to suit the available space. Then he is a navvy, making the foundations for the railway. Then he joins the Permanent Way Department, and lays the sleepers and rails, fastens down chairs, hammers in keys, constructs points and crossings. The signal-box next claims his attention with its levers for points and signals, its interlocking frame, and its connections to be made to signal-posts and points. Then if he is going in for electric locomotives, he must assume the duties of electrician and work out the electric connections used in conjunction with the signalling apparatus. Then he blossoms out as an architect and designs stations, engine sheds, warehouses, and tunnels. By the time he has built these he has become a more or less successful woodworker, and to finish them off he must assume the rôle of a glazier, painter, and house decorator. Then if he makes his own locomotives and rolling stock the list is still further increased. No other model makes its constructor follow such a variety of trades as does a model railway. As time goes on, and the railway system develops, it is possible to add many accessory buildings, such as a colliery with its pit-head gear and winding-house, a dock with its cranes, and a miniature power-station in which the model railway company can make its own electric current for traction and for lighting its stations and goods yards. There is enough in a complete model railway system to keep its constructor busy for several years; in fact, until "the boys" are old enough to manage and look after it for themselves.

C. S.

DENTAL DEPARTMENT.

THE MEDICAL STUDENT AND DENTAL TRAINING.

(From a Correspondent.)

REMEMBERING the great increase in the number of subjects included in the curriculum of a general medical education at the present day, and the great demand made on the time and labour of medical students, one naturally hesitates to suggest any widening of their field of activities. It is only because there is a serious omission, a very necessary piece of apparatus wanting, in an otherwise fairly complete training for the relief of human suffering, that we venture to suggest a further slight extension of an already formidable syllabus. We refer to the treatment of disease and pain arising from some defect in the dental mechanism.

We are mindful of the fact that there exists a separate profession, a body of men trained specially for the treatment of such conditions; but we maintain that a medical man should be master of the situation when consulted on any question of pain and disease; he should be able to diagnose the condition and take the recognised means for the relief of the pain. At the present time the only training a medical student gets, as far as the treatment of diseased teeth is concerned, is an optional month spent in the extraction-room. Now the extraction of teeth is not the recognised method of treatment of dental disease at the present day, except under exceptional circumstances; and while the dental profession is straining every endeavour to preserve both the temporary and permanent masticatory apparatus intact, the medical man, when necessity compels him to act, is driven by want of knowledge to the obsolete and deplorable practice of extracting.

We know that it is only in exceptional cases that necessity compels a medical man to take action where teeth are concerned. In towns and their immediate vicinity special dental skill is almost always available, and the medical practitioner rightly refers his patient to a dentist. Now by reason of the fact that a dentist confines himself to the treatment of conditions arising from one small portion of the human frame, while the medical man treats the whole, there are far more medical than dental practitioners; and while dental practitioners are mostly confined to the large centres of the population, the medical man may often find himself far removed from those centres, in a small town or village, on board ship, or in an out-of-the-way place in the colonies and elsewhere abroad. Under these circumstances a doctor may be consulted by a patient in the throes of most acute, unbearable pain, when action is imperative, and here it is that he feels he has a vulnerable point in his armour; and he is driven, reluctantly no doubt, for very few medical men feel at home with a pair of forceps, to the extraction of the faulty tooth.

There are other reasons, too, why medical men should have some knowledge of dental practice; they are always running against dental disease, in defects in the alimentary system, in blood diseases,

and many other conditions. Their first thought is to examine the mouth, the gateway of the system, and the throat, for here abnormal conditions may be seen directly with the eye, always the easiest and most satisfactory means of diagnosis, and in the mouth the teeth require their most careful consideration. It is the practice now to eliminate this factor as a possible source of the ailment by recommending dental treatment. It is here that some acquaintance with what is and what is not good dental practice is useful, not that the medical man is called upon to suggest what particular treatment is to be carried out, but rather that he should refrain from insisting on treatment which is wrong. How often have we been consulted by patients who have told us that their doctor has insisted that they must have all their teeth out, and on examining the mouth we have found that though their teeth are apparently in a deplorable condition, yet really they are well within the scope of conservative dentistry. It is difficult to persuade such patients that by appropriate treatment their teeth may be saved, and from being a possible cause of their more general ill-health, may be made an important factor in their ultimate recovery.

Under the Act for the medical inspection of school children medical men are called upon to make a very thorough examination and report upon the general physical condition of the children, and such report necessitates a statement as to the condition of the teeth. Practice in the examination of mouths, and a knowledge of the conditions appertaining to the shedding of the temporary and eruption of the permanent dentition, are a necessity for the correct rendering of such a report.

Again, the family doctor occupies with some people a unique position; he is a sort of father confessor, an adviser on all matters relating to their general well-being. He may be asked to express an opinion on the advisability of the work Mr. So-and-So wishes to do for them, or he may be asked his opinion on the work that has been done. He is frequently asked to recommend a dentist, and if he has some knowledge of what is best in modern dentistry, and is able to appreciate good work when he sees it (and he often gets an opportunity of looking at dental work), so much the better advice can he give his patient.

We are far from advising anything like an elaborate training in dentistry for the medical student, but we do think he should be taught how to deal with a case of acute odontalgia otherwise than by extraction. In some hospitals the dental student holds an appointment for a month, called "Casualty Dressing"; here he deals with those cases where the patient comes up complaining of acute toothache, where the only treatment contemplated is the treatment of the one tooth causing trouble. He has under treatment such conditions as hyperæmia of the pulp, acute pulpitis, suppurative pulpitis, and

periodontitis. The immediate relief of the symptoms in these conditions is simple, and the experience gained is invaluable. We think all medical students, especially if they contemplate practising in remote places, would find the experience gained by holding such an appointment well worth the extra time and trouble. The outfit necessary for such treatment need not be excessive, as all that is required is to relieve the pain and the adaptation of the cavity in the tooth to the secure retention of the temporary filling which is to hold the medicament used where it is required. Whilst holding this appointment a series of six or eight lectures given by the dental surgeon attached to the hospital might be arranged; they might comprise a brief description of the anatomy of a tooth, a description of the

temporary and permanent dentition, the theory as to the causes of dental disease, the value of early conservative treatment of decayed teeth, some remarks on diet and its effect on teeth, a general outline of the various means employed by dentists in the restoration of a defective masticatory apparatus, giving the general opinion of the dental profession on the value of fillings and filling materials, crown and bridge work, when it is indicated, and when not, the value of orthodontia in regard to children's teeth, and other matters relating to the care of the teeth. After holding such an appointment a medical man would be in a position to deal with any urgent case of toothache, and he would feel at home when asked his advice on any question relating to the teeth and the practice of dentistry.

THERAPEUTICS AND PHARMACY.

TWO THOUSAND PRESCRIPTIONS ANALYSED.

It is always of interest to medical men to learn what pharmacists have to say about the prescriptions that they receive. A paper upon 2,000 consecutive prescriptions received and dispensed was read recently before the Manchester Pharmaceutical Association by Mr. J. Woodruff Walton and printed in a recent number of the *Pharmaceutical Journal*. The following points are abstracted from it:—

In the first place, contrary to what might have been expected, it is remarkable how few times proprietary articles that are so much "puffed" and advertised were ordered by the medical profession amongst the entire two thousand prescriptions. Next, mixtures are still by far the most common form of administration; altogether 1,359 different mixtures were ordered. The number of ingredients in these reveal how various are the customs of different prescribers. Some medical men rely on one or two ingredients in their mixtures, whilst others crowd a multiplicity of preparations into a bottle, and often the resulting mixture became so complicated that the effects of some of the drugs must have been counteracted by those of others.

Without counting aqua destillata as a British Pharmacopoeial preparation, it was found that—

100	of the mixtures contained	1	ingredient each.
200	"	2	"
330	"	3	"
369	"	4	"
223	"	5	"
98	"	6	"
31	"	7	"
6	"	8	"
2	"	9	"
1,359			

The two mixtures that contained nine preparations each may be given in full, for it will be seen that each really contained a still larger number of substances than at first sight appears. The first contained:

Pot. Bicarb.; Oxy-mel. Scillæ; Tinct. Camph. Co.; Tinct. Gent. Co.; Mucil. Acac.; Spt. Chlorof.; Tinct. Lobelia; Æth.; Glycerin.; Aq. Menth. Pip. ad ʒviij.

If this mixture is analysed into its actual contents, exclusive of the menstruum such as water or spirit, it will be found that it contains—

Pot. Bicarb.		Gentian Root	Tr.
Squills.		Bitter Orange Peel	Gent.
Acetic Acid	Oxy-mel	Cardamom Seeds	Co.
Clarified Honey	Scillæ.	Gum Acacia	
Tincture of Opium		Chloroform	
Benzoic Acid	Tr.	Lobelia	
Camphor	Camph.	Æther	
Oil of Anise	Co.	Glycerin	
		Oil of Peppermint;	

making a total of seventeen drugs in one mixture.

The other example contained—

Bismuth. Salicyl.; Bismuth. Carb.; Liq. Opii Sed. Battley; Tinct. Nuc. Vom.; Ext. Cascar. Sagr. Liq.; Tinct. Chlorof. Co. 1885; Tinct. Belladonnæ; Dec. Aloes Co.; Inf. Gent. Co. ad ʒviij.

This is a very complicated mixture, as is shown by analysing it into its constituents:—

Opium	In the Liq. Opii Sed.	Bismuth. Salicylate	
Sherry	whose formula is not definitely known.	Bismuth. Carbonate	
		Belladonna	
Nux Vomica		Aloes	
Cascara		Myrrh	Dec.
Chloroform		Saffron	Aloes
Cardamom Seeds		Potassium Carbonate	Co.
Caraway Fruit		Liquorice	
Raisins	Tr.	Gentian Root	Inf.
Cinnamon Bark	Chlorof.	Bitter Orange Peel	Gent.
Cochineal	Co.	Fresh Lemon Peel	Co.

The next most numerous prescriptions were powders, of which there were 125, and ointments 124. It appears that cachets are coming into vogue more and more, and that pills are on the decline. The former were ordered in 63 cases; the latter in only 42. Lotions totalled 85, liniments 52. Tablets were prescribed 60 times; capsules, 40; gargles, 29; paints, 19; lozenges, 15; inhalations, 22. British proprietary articles and preparations were ordered 179 times; German proprietary articles, 84; American, 41; and French, 5.

One hundred and fifty-three preparations were prescribed from the British Pharmacopoeial Codex. The British Pharmacopoeia of 1885 still has its adherents, for on seventy-three occasions preparations from it were ordered. Of these the two most favoured were tinctura chloroformi composita and tinctura chloroformi et morphinæ.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

CURRENT HOSPITAL TOPICS.

Hospital Tickets.

A GOOD deal of discussion has taken place in Birmingham on the subject of hospital tickets and the difficulty frequently experienced in obtaining these tickets by deserving people who are not known to subscribers. The Hospital Sunday Fund recommended that the various medical charities, before forwarding to their subscribers the tickets to which they were entitled each year, should send out a form to be filled up, whereby the institutions will be empowered to send the whole or any portion of the subscribers' tickets to the City Aid Society as a central distributing office. This recommendation was referred to a sub-committee, who summoned a conference of representatives of medical charities issuing tickets to consider it. Representatives of the General Hospital, the General Dispensary, the Eye Hospital, the Ear and Throat Hospital, the Dental Hospital, the Moseley Hall Convalescent Home, the Orthopædic and Spinal Hospital, and the Sanatorium were present. The Queen's Hospital did not send a representative. The representatives of the General and other hospitals were unwilling to send out a circular in the way suggested. A few of the smaller hospitals supported the suggestion, and in the end it was decided to adjourn the conference to enable the hospitals to consider a draft circular which Mr. Neville Chamberlain, as representing the City Aid Society, had drawn up. It seems to us, as a matter of experience, that the hospital authorities would be wise not to issue the circular suggested, but to leave the City Aid Society, if it thinks well, to address a circular to the subscribers of each of the hospitals, asking them to forward to that society any tickets they may have to spare each year, and to use it as a central agency where poor deserving people who may need hospital relief may obtain tickets on application.

The Old Site of the Manchester Royal Infirmary.

FOR more than thirty years questions relating to this site have given rise to controversy in the city of Manchester. As the *Manchester Guardian* sagely remarks, the infirmary site seems to be destined to perpetual strife. It was the wish of the trustees of the Royal Infirmary that they should sell the site, obtaining for it the best price they could secure. This was objected to at the time on the ground that, being the finest site in the city, it should be utilised for public purposes, and with much reluctance the trustees ultimately agreed to part with their property to the corporation for a very reasonable figure. The trustees were assured that, even if they got a little less than its full market value for their property, still, whatever might be loss to one public object, would be gain to another, and that for all time the infirmary site would be

dedicated strictly to public purposes. It appears as if a party in the corporation, led by Sir William Vaudrey, are inclined to disregard the understanding under which the site was purchased from the infirmary trustees, and to sell it to the Royal Exchange proprietors or to others at a high figure. Against any such departure from a clear understanding the *Manchester Guardian* raises a strong protest, which we beg earnestly to support. It would indeed be a reflection upon the good faith and character of the Manchester Corporation, after maintaining through all the years of controversy, that the city had certain rights in this site, which placed an obligation upon the trustees to hand it over to the corporation, for the corporation now to ignore their obligations and consent to sell the site to the highest bidder to be used for other than public purposes.

The Royal Hospital, Richmond.

IMPORTANT changes have taken place at the Royal Hospital, Richmond. The retirement of the secretary, Mr. G. C. Rowland, after 37 years' service, on a pension of £100 a year, and the appointment of Mr. Richard Allen to succeed him, is followed by the gratifying announcement of the adoption of the uniform system of accounts, as directed by King Edward's Hospital Fund. This will enable a comparison to be shown in future years between each item in the income and expenditure account, and will lead to the publication of statistical tables which cannot fail to promote the economical administration of the hospital. Colonel R. W. Sparkes, J.P., after 23 years' service, has resigned the office of chairman, and Mr. William Sandover has been appointed his successor. After 18 years' service Miss Foley has retired from the office of matron, but has not been granted a pension for some reason which is not explained in the report, although the committee record their appreciation of her services, and raised a subscription to a purse which was presented to her.

BOOKS RECEIVED.

SPOTTISWOODE AND Co.

"The Medical Register, 1909."

"The Dentists' Register, 1909."

J. NISBET AND Co.

"The Position of Abdominal Hysterectomy in London." By J. Bland-Sutton, F.R.C.S.

J. B. LIPPINCOTT Co.

"Diseases of the Nose, Throat, and Ear." By Francis R. Packard, M.D.

"Diseases of the Digestive Canal." By Dr. Paul Cohnheim.

Edited and translated by Dudley Fulton, M.D.

"Gynæcological Diagnosis." By George Winter. Edited by John G. Clark, M.D.

LONGMANS, GREEN AND Co.

"Heredity and Disease, a Discussion." Edited by J. Nachbar, M.D.

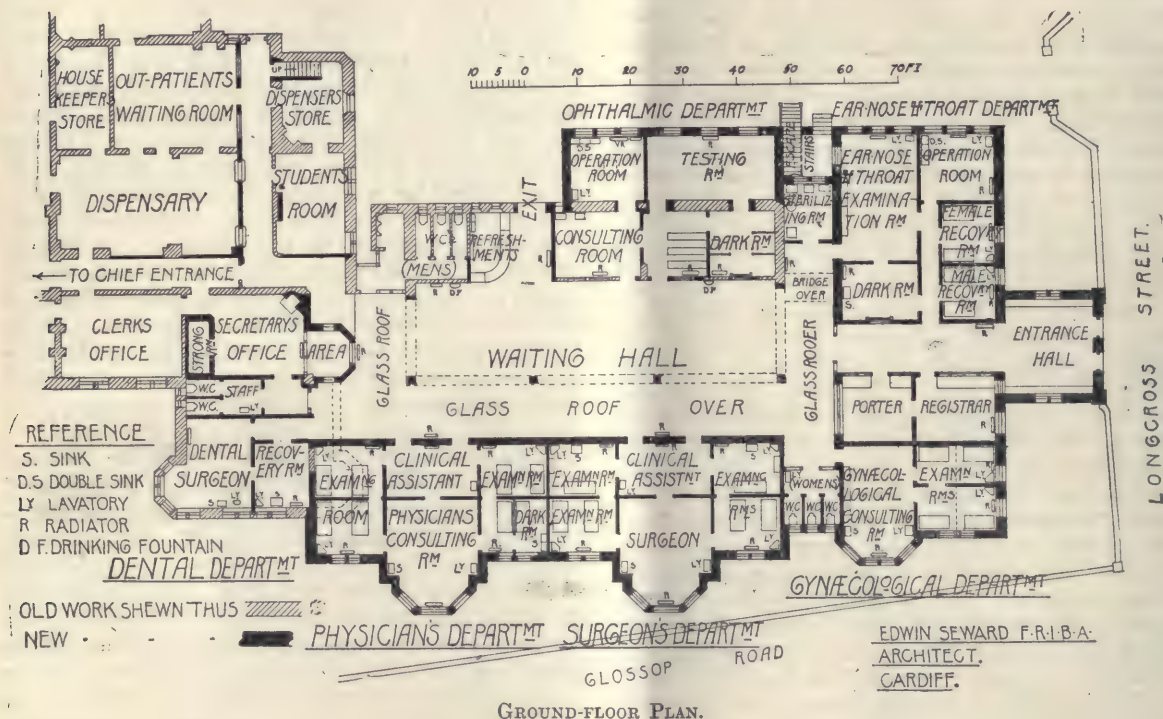
CARDIFF INFIRMARY EXTENSION.

NEW OUT-PATIENT DEPARTMENT.

THE plans show an extension and adaptation of existing buildings rather than an entirely new department, and must be judged therefore from a different standpoint than would be the case if the architect had had a free hand.

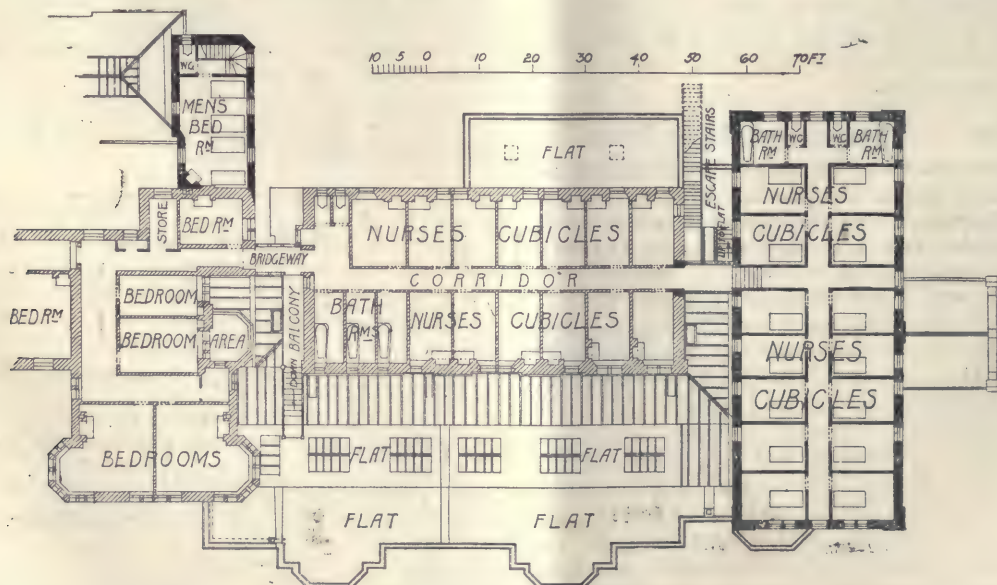
The old out-patient department, which had become far

tary's office and the dental department. The two or three consulting and examining rooms were the rooms now used as dispensary store and students' room. It is clear that the work must have been carried on under the greatest difficulty, and that the need for extension had become acute.



too small for the needs of the hospital, was limited to the space immediately under the nurses' old cubicles, which is indicated by the dotted lines and pillars in the waiting-hall, together with the space now occupied by the secre-

The entrance for out-patients is at the south end of the block in Longcross Street. A wide entrance-hall gives access to a spacious lobby, on one side of which are placed the Registrar's office and porter's room. The latter commands



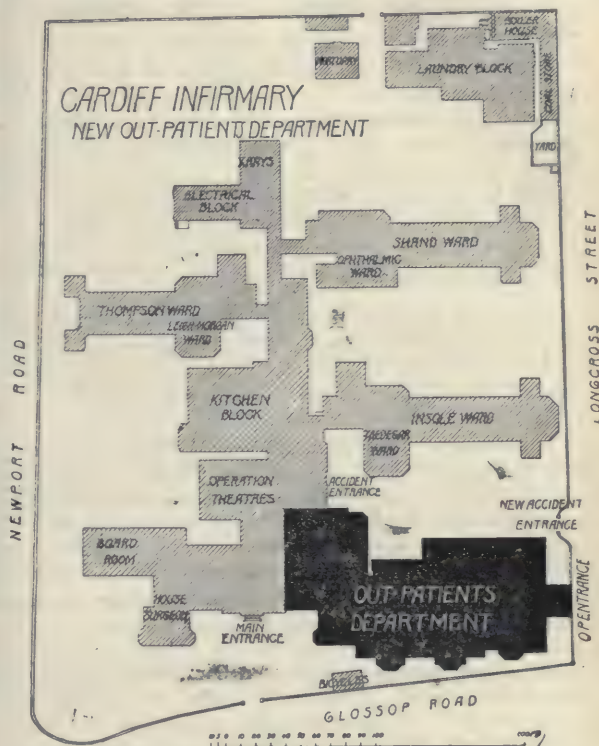
the main waiting-hall by means of a glazed screen. From this lobby patients pass into the waiting-hall, which has an extreme length of nearly 100 feet and a width of 30 feet. On the south-east is the ear, nose, and throat department, consisting of a large examination-room with dark-room attached, an operation-room, and a recovery-room for each sex. Adjoining this department, but separated by the sterilising-room, is the eye department. Here is a small waiting-room, consulting-room, operation-room, refraction-room, and dark-room. On the west side of the hall at the south end is the gynaecological department, comprising a consulting-room and two examining-rooms each for two patients. Three w.c.'s for women patients separate this department from the surgeons' and physicians' rooms. These two departments are identical in form. The surgical department consists of a room for the clinical assistant, forming an ante-room to the consulting-room, two examining-rooms leading out of the clinical room and two out of the consulting-room. The physicians' rooms are arranged in a similar way, except that one of the examining-rooms is made into a dark-room of two compartments. At the north end of the block are two rooms for the dental surgeon. The w.c.'s for male patients are on the east side of the hall, and are separated by an apparently open lobby—an arrangement much superior to the corresponding offices for female patients.

On the east side of the waiting-hall is a refreshment bar, adjoining which is an exit for patients who do not require to go to the dispensary. The dispensary communicates with the main corridor of the hospital, as well as with the corridor for out-patients, but the serving-hatches shown in the latter do not now exist. Out-patients get their medicines in the waiting-room adjoining the dispensary, and pass out by the exit door adjoining. The entrance for accidents (not shown on plan) is close by this part of the building, and here are two rooms used for minor operations.

On the upper floor over the south end of the new building are fourteen cubicles for nurses, with two bath-rooms and two w.c.'s. The flat roof over the western part of the new building provides a convenient airing and recreation space for the nursing staff, and is approached by a staircase from

the connecting-bridge between the main building and the old nurses' cubicles.

The plan strikes us as a compact, well-arranged straightforward method of dealing with the problem, and



provides a most valuable addition to the work of the hospital.

The architect is Mr. Edwin Seward, F.R.I.B.A., who designed the original building, and who had the advantage of the collaboration of Colonel Vaughan, F.R.I.B.A., the Chairman of the House Committee.

NEW APPLIANCES AND THINGS MEDICAL.

[We shall be glad to receive at our Office, 23 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

TANNISMUT; COLLARGOLUM; COLLARGOL TABLETS.

(CHEMISCHE FABRIK VON HEYDEN, Radebeul near Dresden. London Agent: E. W. BLASIUS, 127 Fenchurch Street, E.C.)

TANNISMUT is a new intestinal sedative useful for the treatment of many kinds of diarrhoea. The drug consists of bismuth combined with two molecules of tannin. It is a tasteless dust-coloured powder and can be given in doses of from 3 to 7½ grains three times a day or more often. It is also made up into tablets, each containing 0.5 gramme or 7½ grains. Clinical results have shown that it controls intestinal irritation of many kinds, and that constipation does not follow its use. Collargolum is a colloidal preparation of silver having strong antiseptic properties. It may be administered by inunction, and for this purpose an ointment termed Ung. Credé is supplied. Of this ointment 45 grains should be applied by inunction once a day. It may also be taken internally in doses of from 3 grains to 15 grains per diem. It can also be used for vaginal douches or rectal enemata, about 2 oz. of a 1 per cent. solution being required. It has been given by intravenous injection, quantities of from 1 to 4 fluid drachms of a 2 per

cent. solution being used. It is supplied in tablets, each containing ½ of a grain.

GROVE'S COMMON-SENSE NASAL DOUCHE.

(THE AMERICAN COMMERCE Co., Ltd.,
19 St. Bride Street, E.C.)

THE greatly increased attention which has been paid during recent years to the local treatment of catarrhal and suppurative inflammations of the nose and its accessory sinuses has resulted in the output of numerous devices for facilitating fluid applications in this region. There are a good many nasal douches now on the market of various kinds, but he would be a bold man who would affirm that any of them gives complete satisfaction under all circumstances. The new douche submitted to us by the above firm is certainly in a high degree simple, portable, durable, and sterilisable. It is somewhat novel in form, which is of course no drawback, and it is efficient in use. The only respect in which, so far as can be seen, it may not prove perfectly convenient is that the instrument suitable for an adult would not, probably, be very manageable for a child; this could, of course, be overcome by manufacturing different sizes. The price is 25 cents.

NEWS AND COMING EVENTS.

ALDERMAN LEON EMANUEL, of Portsmouth, twice mayor of that borough, left £10,500 for charitable purposes, of which £1,000 was bequeathed to the Portsmouth Eye and Ear Infirmary.

It is announced that the Army Council has approved the appointment of **Dr. W. S. A. Griffith, M.D., F.R.C.P., F.R.C.S.**, of St. Bartholomew's Hospital, to be consulting gynaecologist to the Queen Alexandra's Military Hospital.

THE Lord Mayor, accompanied by the Sheriffs, will visit St. Bartholomew's Hospital on Friday, May 7, at 3 P.M. to open the new Pathological Block. The ceremony will take place in the Great Hall of the Hospital.

We regret to learn of the death, which occurred this week at 10 Stratford Place, after a long illness, of **Louisa**, wife of Sir Lauder Brunton, Bart., M.D., and daughter of the late Ven. T. A. Stopford, Archdeacon of Meath.

PROFESSOR G. SIMS WOODHEAD, M.D., F.R.S. Ed., etc., has been appointed to serve upon the Committee appointed by the Treasury to consider the claims to additional State assistance and estimates supplied by the Scottish Universities at the request of his Majesty's Government; and to report as to what assistance, if any, should be granted from public funds in the interests of the proper development of the work of the Universities.

DR. F. J. WALDO recently at a Southwark inquest objected to the word "temporarily" in a verdict of suicide while insane. He said he could not record the word, and the jury eliminated it. The Coroner said he knew the word was used, but he considered it wrongly used. A Judge in the Appeal Court had declared that "temporary insanity" was unknown to English law. Dr. Waldo said that the medical term was "impulsive insanity."

THE new out-patient department and nurses' home of the Royal National Orthopaedic Hospital is to be opened on Tuesday, April 20, at 3.45, by Princess Alexander of Teck, and the arrangements for the ceremony are now almost complete. Tea is to be served on the ground floor in the gymnasium and massage rooms and the formal opening ceremony will take place in the out-patient waiting hall. Mr. Alfred de Rothschild has kindly consented to allow Mr. Carl Heubert's Viennese Orchestra to play on the occasion. Her Royal Highness will be received by the Duke of Marlborough, Lord and Lady Denbigh, Sir Richard and Lady Martin, and other members of the committee and ladies' committee of the hospital. Admission will be by ticket, applications for which should be addressed to the secretary, 254 Great Portland Street, W.

FOUR lectures will be delivered at Gresham College, Basinghall Street, E.C., on Tuesday, April 20; Wednesday, April 21; Thursday, April 22; and Friday, April 23, 1909; by **Dr. F. M. Sandwith, M.D., F.R.C.P.**, Gresham Professor of Physics. The lectures are free to the public, and will begin each evening at six o'clock. Lecture I. will deal with "The History of Cancer"; Lecture II. with "The Geographical Distribution and Theories of Causation of Cancer" (illustrated by lantern slides); Lecture III. with "The Causes, Symptoms, and Treatment of Cancer"; and Lecture IV. with "The Results of Recent Research on Malaria, Yellow Fever, Trypanosome Infections, Malta Fever, and Diphtheria" (this lecture also will be illustrated by lantern slides).

INSPECTOR-GENERAL JAMES PORTER, C.B., M.D., Director-General of the Medical Department of the Navy, has been appointed Honorary Physician to the King, in the place of Inspector-General Sir John Watt Reid, K.C.B., deceased.

THE delegates of the Common University Fund of Oxford University have appointed **Dr. Joseph F. Payne**, honorary Fellow of Magdalen College, to deliver six lectures next term on "The History of Greek Medicine up to the Age of Hippocrates," at the schools, on Wednesdays and Fridays, at 5.45 P.M., beginning on May 5.

MR. H. A. T. FAIRBANK, M.S., F.R.C.S., surgeon to out-patients at Great Ormond Street Hospital and orthopaedic surgeon and demonstrator of anatomy at Charing Cross Hospital, has been appointed surgeon to the Miller General Hospital for South East London, Greenwich Road, S.E., in succession to Mr. John Mackern, M.D., F.R.C.S., who has recently resigned.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At an extraordinary comitia on April 5, Sir R. Douglas Powell, Bart., K.C.V.O., President, in the chair, Dr. W. Pasteur was appointed representative of the College at the 350th anniversary of the foundation of the University of Geneva, to be held in July next. The President, after thanking the College for its expression of sympathy on the death of Lady Powell, delivered his Annual Address, in which he offered congratulations to those of the College who had received Royal honours during the past year, and referred to the awards of the College and to the oration and lectures which had been delivered. He mentioned the gifts to the College and the increased number of colonial graduates admitted to the examinations, and also to the action which had been taken to oppose the Charter (or certain of its clauses) which was being asked for by the British Medical Association. The President then read obituary notices of those Fellows who had died during the past year, and concluded by thanking the Officers, Censors, and Fellows of the College for their services during his year of office. A vote of thanks to Sir R. Douglas Powell for his services during the past year was carried with acclamation; and at the election for President he was re-elected by a very large majority. After some discussion and the consideration of various minor matters, a by-law for the admission of women to the examinations of the College for qualifications was enacted for the first time as follows: "Women shall be eligible for admission as licentiates and members of the College and for the grant of a diploma in public health on the same terms and conditions as men, and so far as is necessary to give effect to this by-law, words in the by-laws and regulations importing the masculine gender shall include females, and all proper alterations shall be made in the forms of the Letters Testimonial and the Licence granted by the College. *Provided always* that women shall not be eligible for election as Fellows of the College or be entitled to take any part in the government, management, or proceedings of the College." The proposed commemoration of the 400th anniversary of the birth of Dr. Caius, formerly President and benefactor of the College, and second founder of Gonville and Caius College, Cambridge, was discussed; and finally a report from the Committee of Management recommending that the University of St. Andrews be added to the institutions at which the complete curriculum of professional study for the diplomas of the Royal Colleges may be pursued and whose graduates may be admitted to the final examination of the examining board in England, on production of the required certificates of study, was adopted.

NURSING ADMINISTRATION.

PRELIMINARY SCHOOLS FOR PROBATIONERS.

IV.—THE CURRICULUM.

VERY few matrons who are accustomed to the stupidities of the ordinary probationer and her slow rate of progression in the things which belong to her calling have any idea of the amount which can be taught to the very same woman under better conditions. The examinations set in many training schools at the end of one or two years' instruction in physiology might seem to indicate that the mental calibre of the probationers was of no high order. And yet it is not so much that the probationers are slow to learn. It is that their opportunities for sustained work are scanty, that they come jaded to their lectures, find little time to revise their notes, and live generally in that whirl of bodily labour which is the worst possible condition for acquiring abstract knowledge. Given proper instruction, a routine in which study is the aim instead of the interruption in the day's routine, and a calm environment, and all that is uncomfortably worried through in the space of years may be far better mastered in the space of a few weeks.

The theoretical subjects which the preliminary pupil is set to study are as a rule elementary anatomy, physiology, and hygiene. There can be no question that these are subjects better begun under the guidance of a competent sister than attacked in the lecture room. Indeed, most matrons find that it is necessary to supplement lectures from the medical staff by very easy explanations in class. The study of science is so generally neglected in the school course that its beginnings prove very arduous to the average probationer. Taking the preliminary course at six weeks, the seventh week being occupied by examinations, it will be seen that two lessons a week on each of the three subjects mentioned will be necessary to fit in courses of twelve lessons. Each lesson will last an hour, and be supplemented by two hours' private study, so that at least 18 hours a week will be given up to theoretical work. This may not seem a great deal. But three hours a day of consecutive study will carry the pupil a long way. It is perhaps the most important part of the preliminary training, because while practical details are readily mastered even in the stress of hospital work, the theory cannot be properly grasped except in lessons following in frequent succession, so that one helps to thrive in the next.

Household work is the next point. At Guy's school the admirable plan is followed of setting the pupils to do the work of their own department. The maid attached to the school attends to the floors, windows, and grate cleaning. All else is done under supervision by the pupils, who learn in this way to clean "brights," make beds, light fires, sweep, dust, etc.

The system not only has the very practical advantage of saving labour, but also makes the instruction far more interesting. It is the defect of all housekeeping and housework schools that the

pupils have to have work made for them, a process which takes all the zest out of well performed duties.

The third branch of work to which pupils are introduced has some relation to the work of the wards. They are instructed in bandaging, the use of instruments, the rudiments of dispensing, and the preparation of dressings.

Lastly, the student goes through a course of systematic instruction in cookery, not merely attending lectures or demonstrations, but working in the kitchen and preparing and serving meals. At Guy's the excellent plan is adopted of setting the pupils to prepare meals for the nurses' sick-room. With so large a staff there are generally one or two invalids, and the delicacies prepared under the cookery instructor are highly relished. This valuable part of the pupils' preparation for nursing is a considerable asset in her training, and is a very popular part of the course. Unless the sister in charge is highly skilled in cookery demonstrations, it is better to engage a good teacher for this work.

The following time-table of the pupils' day at Guy's gives a good idea of the practical working-out of the scheme of instruction we have briefly outlined:—

GUY'S HOSPITAL.

PRELIMINARY TRAINING SCHOOL.

Time Table.

7 A.M.	Called.
7.30 A.M.	Breakfast.
8 A.M.	On duty. Practical work, bedmaking, sweeping, dusting, cleaning, etc.
9.30 A.M.	Chapel.
9.45 A.M.	Finish practical work.
10.30 A.M.	Class. Charts, poultices, etc., etc., etc.
11.30 A.M.	Stock work, making sponges, pads, padding splints, etc., etc.
12.15 P.M.	Dinner.
1 P.M.	Study.
2 P.M.	Off duty, 1 hour or 3 hours; alternate days if on duty, stock work.
5 P.M.	Tea.
5.30 P.M.	Class. Physiology, anatomy, or hygiene.
7 to 9 P.M.	Study.
9 P.M.	Supper.
9.30 P.M.	Chapel.
10 P.M.	In rooms. Lights out 10.45 P.M.
On Saturday afternoons, class from 3 to 4 P.M.	
Cooking classes, Tuesday and Wednesday afternoons 2 to 4 P.M.	
Nurses' sick-room meals are prepared and served by the pupils.	
Every alternate Sunday, off duty from 10 A.M. to 9.30 P.M.	

In all essentials the various systems in vogue at different hospitals for the preparation of the probationer agree.

It will be seen that except for the third branch of the curriculum—the lessons in bandaging, use of instruments, etc.—there is nothing in the instruction which could not be given outside the hospital. Yet it is very rare to find probationers who thoroughly understand house work and sick-room cookery and have mastered the elements of physiology and hygiene, and unless they are prepared before being sent into the wards they prove, with the best intentions, a stumbling-block to all the busy workers around them.

EDITOR'S LETTER-BOX.

DEGREES AND DIPLOMAS.

To the Editor of THE HOSPITAL.

SIR,—As a medical man who is neither a graduate of London University nor a diplomate of the Royal Colleges, I should like to offer a few comments from an outsider's position upon the relations between these two corporations as discussed in your leading article of April 10.

The M.D. degree of London University is beyond doubt more highly esteemed of the English laity than any other medical degree in the world. This esteem has been obtained by setting, ever since the foundation of the University, a standard which is admittedly very high, though at the present time it is held by many authorities that the Oxford and Cambridge degrees both academically and practically are dangerous rivals. It is, we all admit, a fact that no amount of book learning and no degree can of themselves make a successful clinician; and that some men who have no degree are deservedly more successful than some men who have. That is no argument against the maintenance of a high level of examination proficiency for the M.D.; and it is no argument in favour of equalising the alphabetical suffixes of those who have and those who have not obtained this coveted distinction. It must be recognised that to grant the London M.D. to those who can pass the present standard for the colleges will certainly destroy the commercial value of the degree. The public cannot distinguish between Pass degrees and Honours degrees: what they look at is the superscription of the brass plate, the endorsement of a cheque, or the signature of a certificate, and there both classes would appear simply as M.D.

The trouble is, as we all know, that at many provincial universities degrees are awarded to candidates whose proficiency, as tested by examinations and otherwise, is not only no greater than that of the College diplomates, but is often distinctly inferior. In other words, these universities are letting their degrees go much too cheap. This policy has for some years been attracting students who would otherwise have come to London; but it is, besides a real disservice to medical education, of very doubtful expediency in the long run. It has resulted in a distrust of the degrees in question, and an enhancement of the public confidence in those of London University. Meanwhile, it is, as you say, esteemed a "decided hardship" by students in London that they obtain only diplomas for an expenditure of money, time, and energy which elsewhere will procure them a degree. But it must be emphasised that they can all, if they but will, obtain the London degree; and that its extra value has been created by the extra work necessary to secure it. By asking for the M.D. degree after a course of study no more arduous than that which now secures for them the M.R.C.S., L.R.C.P., they are asking the London graduates to share with them a definite commercial advantage which the latter, as a body, have made for themselves by the toil of their brains, if not by the sweat of their brows. Further, if they obtain the desired prize on these terms they not only prejudice

the property of the present graduates, but they will not even long enjoy any advantage themselves; for the public will soon cease to attach any particular value to this degree. The success in recent years of the Cambridge school has not been built up by such means: it has been the steady rise of standard there which has attracted more and more students and made them eager to possess the medical degrees of that University.

In making these remarks I am open to the reply that I offer no alternative scheme, and that something must be done if London schools are not to be emptied altogether. That criticism I must admit; but what, in my opinion, ought to be done, and eventually will be done, is the unification of all examinations for medical qualification throughout the kingdom, and indeed throughout the Empire. To allow a score or so of competing corporations to tout for students and revenue by cutting down the standard of their medical degrees to the lowest limit which the inspectors of the General Medical Council will tolerate is a spectacle which is to me revolting. I fully agree with your remarks about the waste of money and energy due to the separate examinations of the University and the Colleges in London; but on the same analogy it can be argued that Licentiates of the Apothecaries' Hall should be allowed the London M.D. If the London University degrees must be watered to save the London schools, at least the process might be confined to the M.B. The honours course in this would then still be a necessary preliminary to the doctorate, and so the latter might be saved from the catastrophe, as I regard it, with which it is threatened.

Apologising for the length of this letter, and enclosing my card, I shall ask you to preserve me from the wrath of diplomates under the anonymity of

Yours faithfully,

London, April 8, 1909.

NORTH COUNTRY.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK APRIL 19 TO APRIL 24.

MEDICAL GRADUATES' COLLEGE AND
POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

April 19, Dr. George Pernet, *Skin*.

April 20, Dr. Newton Pitt, *Medical*.

April 21, Mr. James Berry, *Surgical*.

April 22, Sir John Hutchinson, *Surgical*.

April 23, Mr. Gay French, *Ear, Nose, and Throat*.

ANSWERS TO CORRESPONDENTS.

DR. W. J. LAWRIE writes: In reading over some prescriptions in a German "Rezeptformular" I came across an abbreviation I do not quite understand. One formula was—

R. Acid. acetyl-salicyl. 0.5 (-1.0)

D. tal. dos. No. x.

S. 3-5 mal täglich ein Pulver zu nehmen (Für Erwachsene).

Does the "D." mean "divisa," or "dirige," or what? Another formula has "M.D. in vitro nigr." What does "M.D." exactly mean?

[In German prescriptions "D." means "Dona"; "M.D." signifies "Misce Dona"; "M.D.S." corresponds to the English "M. ft. mist.," and signifies "Misce dona signa."]

THE HOSPITAL

APRIL 17, 1909.

Name

Address

This Coupon must accompany manuscript or contributions intended for THE HOSPITAL.

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 112, VOL. V. [No. 1184, VOL. XLVI.]

SATURDAY, APRIL 24, 1909.

THE INWARDNESS OF SPRING TIME.

A RECENT leading article in the *Times* deals suggestively with the influence of spring upon human well-being. The writer observes that poets have taken far too limited a view of this (poetically) pleasant season. True to their trade, they would confine us to an appreciation of the natural beauties which mark the awakening of the year, beauties which we are all ready enough to praise, and perhaps to praise disproportionately after the gloom and discomforts of a long or rigorous winter. But the reverse of the medal is far from pleasing. If we are to believe the leader-writer, there is no doubt that the "germinal period" of the year is notable as a time of prevailing sickness and still more widely prevailing lassitude among civilised races. It is suggested that our vital forces, overtaxed in resisting the adverse influences of winter, undergo a reaction with the appearance of more genial conditions, and leave us victims to the microbic hosts among which it is our fortune to live. Upon this hypothesis he explains both the sicknesses and the lassitude which are credited to springtime, the latter representing the effects of microbic assaults which, though insufficient to produce a definite malady, yet have their expression in a lack of energy and loss of tone. He observes very truly that the micro-organisms responsible for the diseases which run riot in spring are blood-brothers of the larger vegetable world: their growth is profoundly dependent upon temperature, and in a milder air they may well flourish and multiply at a speed impossible under colder skies, behaving in this respect like the rest of the vegetable creation.

There is no doubt, we imagine, that the cold months are more prolific of microbic disease in general than are the warm ones, but it is open to question whether it is just to damn spring-time with greater blame than winter. This is, of course, a matter of opinion, and will probably remain so owing to the unconventionality of our climate. The writer speaks of the "germinal period," and we wonder what exactly he means thereby. Does February, for example, fall within the germinal period? For this year the epidemic of influenza and other microbic ailments reached its height in that month, and has since been steadily declining. When one considers the extraordinary variability of our climate

anything like intimate correlation of diseases with seasons becomes profoundly unconvincing. One feels that the argument which credits the diseases of spring to the multiplication of microbes under the influence of warmth is much too narrow, even though one accepts the doubtful premiss that spring is more culpable than winter. The proposition that the cold months are the months of microbic disease *par excellence* is more unassailable, and admits of a fairly simple explanation. The cold months are months of far more intimate human contact than are the warm ones. They are months of indoor existence and of deficient ventilation; for it requires no little force of conviction to live with widely open windows during a hard winter, even though the purse runs to roaring fires on the hearth, and when this happy consummation is out of sight, the longed-for warmth is certain to be sought by conserving the animal heat of the body in a closed room. It is plain, therefore, that once a microbic infection is established in a community under such conditions, the way is paved for its rapid propagation, and this in an increasing scale of virulence, for it is a well-known principle of bacteriology that the virulence of pathogenic organisms is heightened by "passage" through a series of susceptible individuals. It remains to consider the factors which favour the commencement of a microbic descent upon a community thus prepared for its dissemination. The classical experiment of Pasteur upon the susceptibility of chickens to anthrax seems to show conclusively, in spite of modern "fresh air" dogmatists, that exposure to cold is capable of destroying a pre-existing immunity to microbic infection. If this be so, it is easy to believe that an individual already reduced in resistance by a sedentary and confined life, may still further be reduced by exposure to winter air (when occasion takes him out of doors) until the point is reached at which some organism haunting his air-passages finds an outlet for its activities and becomes pathogenic.

The writer in the *Times* draws a somewhat ingenuous deduction from the points he has advanced. It is that since tastes, when not artificially vitiated, are to be accepted as indications of the wants of the system, a period of disinclination for work shows the need for a corresponding relaxation

of effort. He observes, truly enough, that the literary man, who perseveres with his work in spite of a consciousness of being "out of form," often finds that the task thus laboriously completed is quite unsatisfactory and requires to be done over again. "Nature often speaks eloquently enough if we will but listen to her; and her warnings can seldom be neglected with impunity." We accept the hint, but it is surely too much to say that the lassitude he claims for spring-time and its microbes

is the general cause of loss of "form." Variation in "form" is most easily gauged in games of skill requiring co-ordination of hand and eye, like billiards, and nothing is more singular than the rapidity with which "form" is developed and lost, perhaps in the course of a single game. Our intellectual activity may pass through analogous phases, though they are not so readily identified, but it is incredible that these variations depend upon the passing attentions of microbes.

ANOTHER X-RAY SCARE.

THERE has recently appeared in the *Times* a letter signed by a well-known radiologist warning against the adoption of the report of the Sub-Committee of the Committee of the London County Council in favour of the treatment of ringworm by *x*-rays, on the ground that it is probable that the delicate cells of the growing brain of the child may be injuriously affected by even the short exposures used in this treatment, though the evidence of impairment of function may not become noticeable until development is complete. This suggestion, printed in the lay press and coming as it does from a medical man who describes himself as "an old *x*-ray worker," is likely not only to do much harm to a most valuable and well-tried method of treatment, but also to raise in the public mind a feeling of fear of the *x*-rays even worse than that produced by the bogey of *x*-ray cancer which has lately been constructed by the lay press. A little knowledge of the facts relating to the physical properties and the physiological action of the *x*-rays which have accumulated during the last ten years shows at once that such fears are groundless. The fact that during the past five or six years many thousand children have been subjected to this treatment in France and in this country, without the faintest suggestion of any mental disturbance, immediate or remote, ought to remove any doubt as to the harmlessness of this treatment. In the treatment of ringworm of the scalp it is the practice to give to any affected area a single dose of *x*-rays sufficient to destroy temporarily the hair-bulb, but not enough to damage the skin in any way. Such a dose is powerless to produce any changes in muscle, fibrous tissue, fat, or nervous structures. Even a considerably larger dose, sufficient to destroy the cells of the epidermis, will have no effect upon these deeper structures, because the cells of these tissues are very much less susceptible to the influence of the *x*-rays. In fact, this greater vulnerability of the skin forms a serious barrier to the therapeutic application of rays to the deeper structures. It will be seen, then, that so long as we apply to the scalp a dose which leaves the skin

intact, we cannot damage the deeper structures. But in the application of *x*-rays to the scalp we have a further protection, in that the bones of the skull act as an obstacle to the passage of the rays. Even at the very thinnest parts of the skull-cap of a child not more than 30 per cent. of the rays go through, and, allowing for the fact that a large amount is also absorbed by the skin and fat of the scalp, not more than 20 per cent. of the dose reaches the cortex of the brain at any spot. These small doses received by the brain cannot be compared in strength and amount with those which led to dermatitis and subsequent troubles in early workers. These *x*-ray operators were exposed in many instances to enormous doses over short periods, or to constantly repeated small doses over longer periods, such as no one will ever be subjected to again, either in research or for therapeutic purposes. These doses led—in the first case within a few days, in the second case more gradually—to obvious destructive lesions, and any subsequent developments have been the result of these destructive lesions. There are no grounds whatever for supposing that a small amount of *x*-rays absorbed by a tissue at one sitting, and producing neither histological nor physiological changes, can have any long delayed result, injurious or otherwise.

To sum up, it may be said that, although a certain amount of *x*-rays does pass through the skull when a child's head is exposed, it is so small that, as the accumulated knowledge of years of experiment and practice tells us it is quite powerless for harm. To many who have only just become acquainted with this method of treatment for ringworm it may come as a surprise to learn that since 1903 some 500 cases have been cured annually at the St. Louis Hospital in Paris; that two or three London general hospitals for four or five years past have each turned out annually from 150 to 250 cures; that in several children's hospitals the treatment has been carried out on a smaller scale for an equal length of time; and that at the Metropolitan Asylums Board schools for ringworm over 1,000 cases have been cured by *x*-rays during the last two years.

ANNOTATIONS.

"The Hospital's" Commission on Beers.

OUR readers will find in the present issue of THE HOSPITAL a Special Report on Beers, having reference to the mode of preparation and the chemical, physiological, dietetic, and medicinal properties of these essentially English beverages. Our Commissioners have spent a large amount of time and care upon their investigations into the scientific aspects of the subject, and the outcome of their researches occupies nearly twelve pages. It will be remembered that twice previously during the past three years we have devoted special supplements to reports upon alcoholic beverages, and the success of these analytical commissions, on whisky and light wines respectively, has led us to extend our inquiries to the no less interesting and important subject of Ales, Stouts, and Lager Beers. The more moderate amongst temperance reformers, with whose aspirations we desire to associate ourselves, have long recognised that the lighter forms of beer are, from the alcoholic standpoint, scarcely to be considered in the same category with ordinary strong liquors. None but the most rabid teetotallers regard a moderate consumption of light lager beer, for example, as injurious to the constitution or morals of the ordinary man. Moreover, whatever views they may hold upon the alcohol problem, and the position amongst alcoholic drinks which is to be accorded to the various kinds of beers, all will agree that nothing but good can come from the publication of a careful scientific and impartial investigation into the whole subject of the manufacture and medicinal properties of these beverages. Our readers will find in this report much that is of interest, and not a little that will be of practical value to them in the course of their professional duties. As we have remarked quite lately, the medical man has not only to tell his patients what they must not drink, but often also to advise them as to what they may. We feel confident that this report will have nothing but a beneficial influence upon the cause of true temperance.

A Legal Analogy.

SOME time ago a vigilant person, alleging that in these lax times the distinction between consultants and general practitioners is becoming effaced, proposed that the assumption of the former status should constitute as definite a step in the professional career as taking silk is to a barrister. It may be the anxious catching of the journalistic imagination, but this parallel is brought to mind by reports of the Prime Minister's speech at a recent meeting of a legal benevolent society. Mr. Asquith recalled the three methods of self-advancement recommended by tradition to the young barrister. They were—to write a text-book, to attend quarter sessions, or to marry an attorney's daughter. *Mutatis mutandis*, much the same advice might be given to members of the not vastly

less crowded ranks of as yet obscure London medical consultants. In this, as in every higher walk of professional life, a prudent marriage counts for much; and although there is nothing in the metropolitan medical world exactly analogous to the second alternative—no polyclinic existing where case sheets are distributed like briefs for undefended criminals (a practice known in legal slang, we believe, by the single but expressive word "soup")—still, every aspirant to eminence in medicine needs no reminding of the wisdom of taking every chance of extending his clinical experience. The first-named plan is as popular in the medical profession as it ever was, and, we learn, still is, among the followers of Coke and Blackstone. As for text-books by young hospital clinicians, there is at present no evidence of a serious shortage in the output of this commodity.

Oxygen Inhalations.

THERE are probably few of the practical applications of physiology to everyday affairs which have aroused the interest of the non-medical public to such an extent as has the administration of oxygen gas to athletes. The restoration of vigour and staying power to a man seriously exhausted by severe muscular efforts, such as those endured in running, boxing, and other strenuous games touches many questions of which the public is cognisant, particularly the ever-absorbing one of records. It is not, however, from the standpoint of whether or no the oxygenation of athletes is legitimate in sport that an article on this subject in the current issue of the *London Hospital Gazette* will chiefly interest the medical profession; but rather because of some of the technical details discussed. It appears that in the ordinary method of administering oxygen by a tube and funnel the percentage of this gas in the inspired air is raised only to 27 per cent. at the most. This was insufficient for the purposes of the particular experiments undertaken, but by a simple arrangement of a celluloid face-piece loosely tucked into the collar below and fastened by a cloth band round the head above, it was found not difficult to offer, with the same current from the cylinder, an oxygen percentage of 70. These facts and figures are well worthy of the attention of medical men, who so frequently have to supervise the management of the oxygen cylinder of a sick patient. Without entering at all into the statistical results of Dr. Leonard Hill's researches, the other point that may be alluded to is his conclusion that the fatigue which follows an athletic feat is mainly cardiac in origin, and due to want of oxygen. It will thus be seen that the London Hospital physiologist is not in agreement with Sir Lauder Brunton, to whose somewhat novel conception of fatigue toxins and antitoxins attention was drawn in our issue of April 10, 1909, on page 30 of the present volume.

MEDICAL OPINION AND MOVEMENT.

THE Causes of Abortion are many and varied, but the proportion of cases of this lesion in which no one of them can be detected is still very considerable. An American author, Dr. Davis, of Philadelphia, claims to have discovered that motor-ing is a potent agent in the production of separation and expulsion of the fertilised ovum from the uterus. He explains this sequence by supposing that the movement of the car subjects the patient to a rapid succession of numerous small jars, and alludes to the facts that, whereas some pregnant women sustain severe accidents or surgical operations without aborting, others may find the use of a sewing-machine pedal prevents the proper continuance of pregnancy. But unless he proposes to elevate this into a general principle, the reasoning is by no means ideal; and to lay down a rule that a succession of minute shocks disposes to abortion more than do single severe ones is a proposition that will take a good deal of proving. As far as that goes, the pedal question is by no means settled beyond dispute. Be that as it may, the author narrates but two cases in support of his contentions, neither of which is convincing. On this slender substratum he raises an edifice of dogma which includes a special symptomatology and ætiology of motor-car abortion. He regards motoring as distinctly dangerous in pregnancy, except towards the latter months; but he seems to realise that not many motor-owning patients will accept his opinions or follow his advice.

THE Intractable Vomiting of Pregnancy is one of those exasperating conditions, which every medical man has to treat sooner or later, wherein every resource of the therapist will sometimes fail. A very unusual variety is described in *La Tribune Medicale*, in which this symptom appeared in a tabetic woman, and is regarded as due to gastric crises. The patient was thirty-five years of age, pregnant for the third time, and subject to attacks of abdominal pain lasting about four days, during which nothing whatever could be retained in the stomach. During the intervals, which were of nearly equal duration, she vomited occasionally, but not in a way that could be called pernicious or intractable. As for the tabetic condition, she presented Argyll-Robertson pupils, diminished but not abolished knee-jerks, a moderate degree of anæsthesia of the right leg, and a slight lymphocytosis of the cerebro-spinal fluid. No indisputable history of syphilis could be obtained. In two previous pregnancies—the offspring of which both died soon after birth—there was also very severe vomiting, necessitating rectal feeding and saline infusion. It must be added that for some time before the third pregnancy she had been subject to gastric crises at intervals of two or three months, and frequently coincident with menstruation. The conclusion seems reasonable that the tabetic state had also something to do with the severe crises during the period of gestation.

BEFORE the New York Obstetrical Society have been read two papers on "Movable Kidney," which are printed in the *American Journal of Obstetrics*. Dr. Ely considered chiefly the relations of this condition to other diseases, especially in the pelvis: perhaps the most interesting and original of his remarks were on the subject of appendicectomy, which operation he has on thirty-two occasions observed to be followed by entire cessation of symptoms previously attributed to the movable right kidney. The improvement noted has been, he thinks, greater than can be accounted for by the necessary rest in bed and abdominal belts ordered. Dr. Baldwin has collected the opinions of many eminent surgeons on the question of operative interference for the condition. Though great diversities of opinion and practice are revealed, it is evident that the majority are in accord with Dr. Baldwin's own convictions. These are that no case should receive operative treatment until every other means has had the most thorough trial: that many of the symptoms ascribed to movable kidney are not in fact due to it at all: that mobility of less degree than the length of the organ itself practically never causes symptoms: and that nephropexy for movable (as opposed to actually wandering) kidney is often unsuccessful.

THE current issue of the *Journal of the Royal Army Medical Corps* is exceptionally full of noteworthy contributions. Captain Bourke describes an extensive epidemic in a regiment at Bloemfontein of a disease which more resembled, he thinks, Dr. Duke's celebrated "fourth disease" than it did either scarlet fever or rubella. In all thirty-three cases occurred among the soldiers, with one death; and three among the children. Among the peculiar features were the comparative mildness of the disease, especially as regards pyrexia; several of the patients had a normal temperature throughout. An initial sore throat was the rule, but headache and vomiting were noticed only three times prior to the eruption, though the former was sometimes present after the rash appeared. A low pulse-rate was a marked feature in almost every patient. The rash was usually the first symptom, and it appeared most often on the neck and chest, spreading afterwards to the abdomen, thighs, and groins. It was distinctly scarlatiniform, but did not affect the face; and the circumoral pallor so constantly seen in true scarlet fever was conspicuously absent. Desquamation was the rule. The typical strawberry tongue of scarlet fever was seen only four times; the posterior cervical and the inguinal glands were always enlarged. It so happened that in many cases the incubation periods could be fairly accurately determined, and they were found to vary between seven and twenty-eight days, most often about fifteen: this of itself is almost enough to exclude scarlet fever as the cause of the outbreak. Five cases of albuminuria were noted, and three of otorrhœa: no other complications occurred. Captain Bourke attributes the epidemic to contagion conveyed by

infected blankets. About twenty-one days after the issue of one extra blanket per man just before the approach of the cold weather the first cases appeared: these blankets were not new, but had been in store for one to two years since their last usage.

MAJOR C. G. SPENCER records a case of Sarcoma treated with Coley's fluid. The patient was first seen in 1906 with a hard swelling reaching from the pubes nearly to the umbilicus, and complaining of frequent and painful micturition. The urine contained a little albumin, but no blood nor casts. In September of that year an attempt was made to remove this tumour, which was shown to be a sarcoma by microscopical examination; but as it infiltrated the pubes, the recti, and the bladder, the operation was abandoned. Twelve injections of Coley's fluid were then given, during which the general state deteriorated greatly: they were then stopped and the patient sent away on sick furlough, from which he returned with a gain of fifteen pounds in weight and a diminished tumour. At the beginning of 1907 he had another course of injections, attended by the same result of cachexia and tenderness of the growth, but succeeded by rapid improvement after the end of the series. A third set of nineteen injections was then ordered in April 1907; and in December 1908 he was perfectly well, with no sign of any tumour, and no vesical symptoms. Major Gunter publishes some notes on surgical technique which are of great importance. He has experimented with various methods with a view to the selection of those which can be carried out as well in the field as in a hospital: thus he has used empty biscuit tins instead of drums for sterilising dressings. As a result of painstaking bacteriological work he concludes that the use of gloves is a desirable part of operative technique, but that guards for the mouth and the field of operation are unnecessary. He thinks highly of the iodine method of preparation of the skin after simple dry shaving, described already in *THE HOSPITAL*, January 23, 1909; p. 426. The advantages of this easy procedure in military surgery are obvious.

AN interesting case, in which Gall-Stones were found in the Urinary Bladder of a woman, is published by Michel in the *Zentralblatt f. Gynäk.* Three years ago the patient had a definite hepatic crisis, accompanied by symptoms of peritonitis in the right half of the abdomen, especially localised to the left hypogastrium. Her attendant diagnosed a perityphilitic effusion, secondary to a cholecystitis. So far as could be judged this effusion was slowly absorbed, but the patient suffered from time to time with suppression of urine and vesical pains. A year ago the symptoms referred to the region of the bladder reappeared, and topical irrigations were prescribed as though for a cystitis. This proved of no avail, and eventually the diagnosis of vesical calculus was made, and the patient was sent to Dr. Michel for operation. Cystotomy was performed by him, per vaginam, and four stones were discovered embedded in the bladder wall. These were removed with difficulty, and the bladder and vagina were then

sewn up with catgut. The stones proved to be biliary calculi, the two largest weighing respectively 11.4 and 10.1 grammes. It is likely that a direct communication existed between the gall-bladder and the urinary bladder, for bile was at times discovered in the urine, both before and after operation, and at no time was there the slightest evidence of jaundice. The author's surmise is that, as a consequence of the original inflammatory process, a communication was formed between the gall-bladder and the right ureter, down which the gall-stones travelled into the bladder. This bilio-urinary fistula has remained patent.

COCCHI, first assistant to Professor Burci at the surgical clinic at Florence, contributes to *Il Morgagni* an interesting study on the results of Partial Prostatectomy. The surgical treatment of hypertrophy of the prostate, according to the author, falls into three well-marked divisions. In the first are such cases in which methodical catheterisation is sufficient, aided, if necessary, by suprapubic vesical fistula. In the second class fall such cases as are benefited by palliative operative treatment, under which Cocchi would understand White's operation, vasectomy, and possibly also Bier's ligation method, while in the third class are included such cases as demand more radical and severe measures, such as prostatotomy, partial prostatectomy, and complete enucleation. Discussing these various classes, Cocchi expresses the opinion that in the first methodical catheterisation is the method of choice, while the formation of a suprapubic fistula is to be deprecated on the ground that it is really useless and at the same time open to grave objection on various counts. He is disinclined to attach much importance to palliative operations of the Bier-White class, as statistics have not shown that they are efficacious. This point, however, he does not dwell upon, and he leaves his reader in ignorance of the statistics which he relies on. It is highly important that this question of the uselessness or otherwise of vasectomy should again be considered. English surgeons are more or less united in condemning the operation, but hitherto no reliable comparative statistics have been adduced to prove that those who still rely on the operation, as Rovsing of Copenhagen and other Continental authorities do, are wrong.

TURNING to the radical operations Cocchi expresses himself greatly in favour of partial prostatectomy in selected cases. Prostatotomy he dismisses as an operation that has few points in its favour and many against it, while total prostatectomy, which is the ideal operation in most cases, is out of the question in some instances where the patients cannot stand such prolonged and serious interference. The author gives a very interesting account of the evolution of the partial method, from which it appears that Amussat, as early as in 1827, attempted it by the hypogastric route. Dittel in 1885 first seriously attempted the operation, and he was followed by Belfield in America, Guyon in

France, and many others. Since total enucleation has become popular, through the exertions and the able work of Freyer, the partial operation has fallen into disfavour, as the author thinks, unjustifiably. He sums up the points in favour of the operation as follows: it interferes less with the normal relations of the structures attacked; it permits the surgeon to remove the obstruction without opening up artificial pouches at the base of the bladder where pus and blood may stagnate; it is a less severe operation than total enucleation. This summary is undoubtedly too favourable, and the excellent results established in the four cases which the author adduces can hardly be accepted as conclusive evidence in favour of the operation. Where in any case there is a possibility of radically removing the gland the surgeon will find Freyer's statistics and results too convincing to allow him to resort to the partial operation, which has apparently as many dangers as the total operation, and which can scarcely be said to be a radical operation in the true sense of the word.

IN an interesting paper read before the Belgian Academy of Medicine Dr. Desguin discusses the differential diagnosis between Typhoid Fever and the gastro-intestinal type of Pneumococcal Infection, and he demonstrates several practical means by which a correct diagnosis may be attained. A colorimetric examination of the blood, using Tallqvist's scale, is one of the simplest methods at the disposal of the practitioner. In typhoid fever the hæmoglobin content may fall to 70 or 60 per cent., although the appearance of the patient may not suggest such a condition. On the other hand, in a pneumococcal infection the patient is pale and oligohæmic; but the hæmoglobin content is the same as in a healthy person. A second means consists in estimating approximately the relative proportion of red and white corpuscles. In typhoid there is leucopenia; in pneumonia hyperleucocytosis. The author maintains that these two signs never fail, and are quite convincing. As a third means of diagnosis, however, he suggests the inoculation of white mice with a few drops of the patient's blood. This animal is extremely sensitive to the pneumococcus, but is little affected by Eberth's bacillus. In the former case the mouse becomes rapidly ill. If the animal is then killed and the blood from the heart examined bacteriologically, the presence of the pneumococcus is easily testified. But if at the end of 24 hours the mouse remains healthy, it may be concluded that the patient is suffering from typhoid. The author is of opinion, however, that only in exceptional cases is it necessary to have recourse to this third test, as the first two are quite sufficient for all practical purposes.

IT is a well-recognised fact that lactation causes more or less complete suppression of menstruation, so that the activity of the mammary gland is evidently in some way antagonistic to the uterine functions. This fact suggested to Pryor, of New York, and Schrober, of Philadelphia, in 1901, the treatment of uterine fibroid and uterine hæmor-

rhage by Mammary Oportherapy. Dr. Batuaud, in a contribution to the *Journal de Médecine*, discusses this method of treatment. He is unable to confirm the statements of these American authors in regard to any diminution in size of uterine fibroids as a result of the treatment, but he finds that the administration of mammary gland dried and powdered has a pronounced effect on the hæmorrhage from fibroids, and in cases of abnormal menstruation, too frequent, too profuse, or of too long duration, it is able to bring about a return to the normal condition. Frequently the effect is immediate, but in about 5 per cent. of cases the treatment fails entirely. The dry powder of mammary gland is given in cachets of 5 centigrammes corresponding to 3.5 grammes of the fresh gland. The usual dose is two cachets taken before meals every day, and this may be doubled during hæmorrhage or menstruation. Intervals of several days may be made in the course of the treatment, according to the effects produced.

IN a contribution to the *International Journal of Surgery*, Dr. Walter L. Hunt discusses the treatment of fracture of the neck of the femur. By a brief survey of the literature on the subject and of the opinions expressed by several leading surgeons, he shows that the idea is very prevalent that bony union almost invariably fails to take place, and that satisfactory treatment of these cases is extremely difficult. He would maintain, however, that this failure is due to faulty technique, and proceeds to demonstrate the method of Professor Maxwell, by which both the author and Dr. C. E. Ruth, of Iowa, have succeeded in obtaining most gratifying results. As this method appears to be little known, a short account of it may prove useful. The patient is put on his back. The thigh is flexed on the abdomen to relax the psoas and iliacus muscles and bring their line of action above the neck of the femur and prevent their forcing soft tissue between the fragments. Extension is then made, and at the same time an assistant makes traction outwards and raises the great trochanter to the same level as its fellow. Extension on the leg is kept up by means of adhesive strapping extending well above the knee, and a five to twenty-five pound weight over a pulley. Binder's board is now moulded to the internal, anterior, and posterior aspects of the upper part of the thigh, and around this a broad band of muslin is extended by a cord over a pulley at the side of the bed, to which is attached a weight of eight to sixteen pounds. This pulley must be at such a height and carry sufficient weight to overcome the tendency to eversion and carry the trochanter to the level of its fellow on the opposite side. To effect this the direction of the pull should be outwards, ten degrees upwards towards the armpit and forwards at an angle of about forty-five degrees. The knee should be bent every four or five days to prevent ankylosis. Counter extension is made by raising the foot of the bed and also the side corresponding to the injured limb. The patient can be raised to the sitting posture daily without disturbing the fragments, and the method is said to be quite free from pain or discomfort. Four to six weeks' confinement are sufficient to procure union.

HOSPITAL CLINICS.

THE VALUE OF SANATORIUM TREATMENT.

By ARTHUR LATHAM, M.D., F.R.C.P., Physician to St. George's Hospital.

A Paper read before the International Congress on Tuberculosis at Washington, 1908.

SOME years ago I expressed the opinion that sanatoriums are essential to the successful treatment of pulmonary tuberculosis on a large scale, and that these institutions afford invaluable aid to any campaign directed towards the eradication of the disease, provided they are used intelligently as an important link in a properly co-ordinated system of attack. After several years of increased experience I see no reason to withdraw this opinion: on the contrary, I am more convinced than ever of its truth.

The fact that this opinion does not meet with universal acceptance is due to several causes. In the first place, the majority of sanatoriums are inefficient. Many of these institutions are mere hotels run for profit, and do not provide the discipline and constant medical supervision which are so essential to success. The value of a sanatorium depends on the man at its head, and no sanatorium in my experience is efficient when the head of it resides at a distance, or has his powers and discretion fettered by either a lay or a medical committee. Much of the criticism of sanatorium treatment is based upon the erroneous deduction that because certain sanatoriums fail to give good results, therefore sanatorium treatment is a failure.

The second reason why the value of sanatorium treatment does not meet with universal acceptance is the fact that sanatoriums have been regarded in some quarters as sufficient in themselves, and treatment therein as a certain cure for every case of consumption. No level-headed man would ever have regarded sanatorium treatment in this light. It is clear that a sanatorium is a link in a comparatively long chain, and that unless it forms a part of a carefully thought out system, embracing amongst other things dispensaries, hospitals, homes for the dying and advanced cases, careful disinfection, and after-care, together with assistance to the breadwinner's family during his absence, it cannot bring about the eradication of tuberculosis. Those who have taught the public to regard sanatorium treatment as a specific cure for all stages and forms of pulmonary tuberculosis will be, and, in fact, have already been, discredited; but—and this is of more importance—sanatorium treatment has to a certain extent fallen into disrepute amongst the less intelligent members of the public owing to this teaching. Sanatorium treatment does not cure all forms of pulmonary tuberculosis, and no form of treatment ever will cure all cases of advanced and long-standing disease. Is it fair to condemn sanatorium treatment because it cannot accomplish the impossible? Again, if a working man in an early stage of consumption is sent to an efficient sanatorium, there is every prospect of the disease being arrested; but if he is allowed to return to precisely those conditions under which he contracted the

disease—too hard work, bad air, insufficient food—the disease will almost certainly return. Is it fair when this happens to say that sanatorium treatment is of no avail?

The third reason why sanatorium treatment does not meet with universal acceptance is that the erection and the maintenance of sanatoriums have cost too much. The erection of costly palaces for the treatment of consumption in the past is a standing monument to the possibilities of human folly. Fortunately this wasteful expenditure of money is now a thing of the past. Mr. A. William West (architect) has shown that it is possible to erect an efficient and comfortable sanatorium for 200 persons at a total cost, for erection and equipment (apart from the cost of land), of £100 a bed. It may be mentioned, in order to show the durability of his construction, that in the Benenden sanatorium for members of the working classes the floors and doors are made of teak. The building of a sanatorium at a reasonable price has been accomplished by Mr. West by means of a special steel girder construction which does away with the necessity for expensive foundations, and makes it possible for the larger part of the labour to be carried out by unskilled workmen. Again, Dr. Paterson has shown that it is possible to conduct the Brompton Hospital sanatorium at Frimley at a cost of 25s. per week per patient for maintenance and administration. This has been accomplished largely by his system of graduated labour, whereby the greater part of the labour necessary for the upkeep and cleaning of the sanatorium is carried out by the patients themselves, with marked benefit to their health.

The fourth reason why the value of sanatorium treatment does not meet with universal acceptance is that it is held by many that it is impossible to provide the necessary funds to pay for the treatment of the majority of sufferers. The German insurance system has shown the inadequacy of this argument. Again, Mr. C. H. Garland has organised a fund amongst the employees of the British Post Office, which meets the cost of sanatorium treatment for all such employees who contract consumption by an individual contribution of 3d. a week, which is deducted at headquarters from their wages. It is interesting to note that nearly 40,000 employees are contributing to this scheme. There is no reason why a scheme of this kind should not be in existence amongst all skilled workmen.

The final objection is the difficulty in arranging for the maintenance of the family when the breadwinner is away, and in finding suitable work for him on his return. The German Government have solved this problem and other countries can do the same. The employees of the British Post Office who contribute to the scheme outlined above receive full pay from the Govern-

ment for six months when away at a sanatorium, for the provision of their wives and families. At the Brompton Hospital the Lady Almoner supplies the necessary link between the patient and his employer, the clergy, and the various charitable bodies, and in this way the needs of his wife and family are met without much difficulty. Dr. Paterson's system of graduated labour has shown that it is possible to treat a man in such a way that the muscles used in his ordinary work are kept trained, and the patient is enabled to resume his previous occupation immediately after his discharge.

The best proof of the value of sanatorium treatment is obtained from a study of the results of treatment before and after the adoption of sanatorium methods. Dr. J. E. Pollock published in 1865 the results of treatment in 3,566 cases of consumption, in all stages, which had been observed by himself. The average duration of life of all these cases, from the first symptom of the disease to the fatal termination, was two and a half years. Dr. Pollock further found that no less than 83 per cent. of the patients whom he saw in the early stage of the disease died within five years of their first symptom. Sanatorium treatment has completely altered this grim picture. Thus in 1905 no less than 57 per cent. of the patients who were treated in 1900 in the Prussian and Hessian State Railway sanatoriums were capable of full work. We see, then, that before the advent of sanatorium treatment 83 per cent. of patients in an early stage were dead at the end of five years, and that after its advent 57 per cent. remained in full enjoyment of their working capacity at the end of five years.

More recent statistics tell the same tale, and also show that by combining sanatorium with tuberculin treatment still better results can be obtained, whilst the percentage of relapses is still further diminished. Thus Dr. Ritter, of the Hamburg Heilstätte Edmundsthal, has found that patients who had been treated by sanatorium methods alone showed the following capacity for full work three years after their discharge from the sanatorium, namely:—

Patients treated in first stage of disease	...	72%	at work
" second " "	...	57	"
" third " "	...	22	"

Patients who had been treated by sanatorium methods, together with tuberculin, showed the following capacity for full work three years after their discharge from the sanatorium:—

Patients treated in first stage of disease	...	95%	at work
" second " "	...	82	"
" third " "	...	50	"

No criticism can ever overcome the force of these statistics, but the value of sanatorium treatment is not confined to the immediate effects produced on the patients. One of its greatest features is its educational value. Sanatorium treatment has done more than anything else to awaken the public to the necessity of hygienic conditions of life. This is partly due to the notice taken by the public press of the movement, and partly to the fact

that every patient who leaves a sanatorium acts as a missionary and preaches the value of hygienic living and the necessity of preventing the spread of infection.

We have known for many years that the continuous supply of fresh air, good hygienic conditions, and a nutritious diet increase the resisting capacity of the tissues. We have also known for many years that the success of sanatorium treatment depends largely on the regulation of the amount of rest and exercise prescribed for each patient. We did not understand exactly how exercise does good, or why in many instances it does harm. Dr. A. C. Inman, by his study of the opsonic index of the patients performing the different grades of labour prescribed for them by Dr. Paterson at the Frimley Sanatorium has given us an explanation which is at once reasonable and scientific. This explanation shows clearly that the reaction of a patient to the disease depends very largely upon the question whether the amount of tuberculin absorbed from the diseased focus is beyond the immunising capacity of the body or not. Excessive absorption—i.e. excessive auto-inoculation—means steady progress of the disease, accompanied with fever. The amount of this absorption or auto-inoculation depends very much on the amount of movement permitted. If the amount of auto-inoculation is sufficient and not too great the body tissues are stimulated and opsonins and other defensive bodies are manufactured. After a time the tissues fail to respond to this stimulus, and consequently a larger stimulus is required. This larger stimulus is produced by increasing the exercise, which increases the absorption of the tuberculous products. It is in this fact that we have the secret of the success of those sanatoriums in which the patients do better than the patients of other sanatoriums simply because they are *gradually* educated to walk as far as 20 miles a day, and are not considered to have reached a satisfactory condition when only five or six miles a day have been accomplished. Here also we have the explanation of the success of Dr. Paterson's scheme of graduated labour. Too large a stimulus—i.e. excessive auto-inoculation—renders the body tissues incapable of response. Such a stimulus is due to excessive movement, and can only be met by rest. The decision as to the amount of exercise or movement permitted to an individual patient thus requires great judgment and discretion. Constant medical supervision alone can decide this question correctly. This constant attention to every detail, and especially to the amount of movement permitted, is the key to success. It is clearly possible to give a patient sanatorium treatment without sending him to a sanatorium. Most patients, however, are more likely to carry out the treatment in every detail if they are in an institution entirely given up to this purpose, for it is hard to make them understand the importance of continuously carrying out all the directions given unless they are first sent to school to learn how to get well. At the same time, patients of strong character with the necessary home facilities who intend to get well can benefit almost if not quite as much by treatment under close medical supervision at their own homes.

MEDICINE.

EXAMINATION OF THE PUPILS.—III.

The Outline of the Pupils.—Another point that should receive attention is the shape of the pupil—as to whether it is round or oval, centric or ex-centric, regular or irregular in outline. Irregularity would suggest some affection of the iris itself; indeed, any abnormality in the shape of the pupils is chiefly of importance as an indication of local disease or malformation, rather than as a symptom of any nervous disease.

Finally, there are three contractile reactions of the pupils that should be tested—namely, to light, to convergence, and to painful stimulation of the skin of the neck.

Dilatation on pinching the skin of the neck.—This is by a long way the least important of the three. The normal pupil should dilate in response to a sharp nipping of the skin over the neck. Absence of such dilatation, however, is not necessarily pathological, and at most it could only point either to fixation of the iris, paralysis of the cervical sympathetic, or the action of some drug such as belladonna or eserine. Everything that can be learnt from the reflex can be learned, so far as present knowledge goes, without it.

The reaction to light.—When the light which is entering the eye becomes brighter the healthy pupil immediately contracts; it is a reflex act, and much can be learned from abnormalities in it. In the first place, however, it is important that the reaction should be tested for in a proper manner. To cover up both eyes with the hands and then to suddenly remove the latter and at the same time try to observe the pupillary changes is a very common but a very imperfect method of making the examination, and this for two reasons: in the first place, the reaction obtained in one eye may be due to light entering the other, a source of fallacy which can only be avoided by testing each eye separately; in the second place, the pupil often responds so rapidly that its movements cannot always be followed with certainty unless the pupil can be watched before exposure to the brighter light as well as at the moment of that exposure.

Under normal circumstances a beam of light thrown into one eye only causes both pupils to contract. If, therefore, steps are not taken to cover up the opposite eye, the pupil of the eye which is being examined will be as much contracted whilst it is shielded from the light as it will be when the light is allowed to fall on it again.

A very good way of testing the light reflex is as follows:—Supposing the right eye to have been closed by one of the observer's hands whilst the patient is sitting opposite a lamp or a bright window, the observer should interpose some opaque object, such as a book or his other hand, between the lamp or window and the eye that is being examined. The interposed object should be at such a distance from the patient's face that the pupil can be watched all the time. On removing the interposed object the full light from the lamp or the

window will fall upon a pupil that has been watched whilst in the comparative dark, and one can then tell whether it contracts quickly or sluggishly or not at all. It is better to make use of light coming from a distance rather than of a match at close quarters, because not only may the warmth of the match cause the patient to start and his pupil consequently to move emotionally, but also it may be difficult to prevent the patient from looking directly at the match and thus causing contraction of the pupil from accommodation. If, however, the patient can fix his mind upon distance and learn to pay no attention to the lighted match, it is not a bad method of examining the light reflex to have the patient in a dim light—not too dim to prevent the observer seeing the pupil—to cover up one eye entirely, to hold a lighted match at the side of his head, and then to bring it forward deliberately in front of the uncovered eye.

If the pupil reacts to light, well and good. If, however, it does not, there is something the matter. If the effects of atropine, homatropine, eserine, and other similar drugs can be excluded, and also local disease that might fix the pupil, then there is some lesion in the reflex arc.

It will be remembered that, owing to the partial decussation of the optic nerves at the chiasma, some of the nerve fibres from each eye pass into the opposite optic tract as well as some into the optic tract of the same side. The right eye, for instance, is connected with the nucleus of the right third nerve by the non-decussated fibres of the right optic nerve, whilst it is also connected with the nucleus of the left third nerve by those fibres of the right optic nerve which decussate and pass up the left optic tract. Hence afferent impulses ascending from the retina of the right eye cause efferent impulses down both right and left third nerves. Therefore, if light is thrown into the right eye, not only will the right pupil contract, but the left will do so also, even though the left eye is kept in dimness.

If the right pupil fails to contract when a ray of light is thrown directly into it, but still actively contracts when a ray of light is thrown into the left eye, the block is obviously in the sensory side of the right reflex arc, its motor side, including the reflex centre, being intact and active.

If, on the other hand, the right pupil fails to contract either when a beam of light is thrown into it or when a light is thrown into the left eye, whilst the left pupil contracts both when a beam of light is thrown into the right eye and when a similar beam is thrown into the left eye, it is obvious that the block is on the motor side of the reflex arc of the right eye—that is to say, either in the region of the nucleus of the right third nerve or in the right third nerve itself, and that the sensory side of the right eye and both the motor and the sensory sides of the reflex of the left eye are intact.

(To be concluded.)

THERAPEUTICS AND PHARMACY.

THE REVISION OF THE BRITISH PHARMACOPOEIA.

THE Report of the Committee of Reference in Pharmacy to the Pharmacopœia Committee of the General Medical Council embodies the results of work accomplished in connection with the revision of the British Pharmacopœia up to October 29, 1908. It is a pamphlet* of but thirty-two pages; but a perusal of it shows that much unrecognised work is being done for the profession at large. All the various tests that different drugs have to comply with in order to be passed as suitable for medicinal use are being re-tested; some are found too stringent, some inadequate, so that new tests, or modifications in the old ones, have to be devised, and in their turn tested. All this means long and patient work. The profession receives the results passively, scarcely realising how important the work is, and seldom knowing or caring who is responsible for it.

The Committee appears to have directed very special attention to the question of how to detect lead as an impurity in drugs; and the details of the quantitative colorimetric lead test that is regarded as the best are given in an appendix. Rules are laid down as to the maximum quantity of lead permissible in various preparations. The proportions of lead suggested as allowable vary from none at all to 20 parts per million.

The Revising Committee, except in so far as lead is concerned, is taking the Pharmacopœia alphabetically, and when its report was published it had reached *extractum gentianæ*. Amongst the large numbers of points dealt with the following may be mentioned: The old ferric chloride test for acetanilide should be omitted, as the reaction occurs even when acetanilide is not present. The following formula for acetum cantharidis was experimentally confirmed and agreed to, the name to be altered to acetum cantharidini:

Cantharidin	...	...	...	1 gm.
Glacial acetic acid	...	...	...	200 c.c.
Acetic acid	...	...	...	2,000 c.c.

This preparation will be of definite strength, and yet more easily made than the present official acetum. Acidum carbolicum liquefactum is recommended to be made by adding sufficient water to each 50 grains of phenol to make it up to one fluid drachm; this would be slightly weaker than the present preparation, but it would be of constant strength, and the additional water thus introduced would be useful in preventing crystallisation of the acid. The best means of detecting cotton seed oil in the lard used for ointment is engaging the attention of the Committee, and experiments are being carried out on this point.

In view of recent discussions in regard to anæsthetics the remarks upon ether are important. It is recommended that the description of its production should read "may be prepared." This modification is desirable to permit the use of ether prepared in this country from industrial alcohol; such ether can be and is prepared on the commercial

scale of such purity as to be indistinguishable from ether made from dutiable alcohol. To exclude the presence of methyl oxide it should boil at a temperature not lower than 34° C. Under the name of "Æther anæstheticus" an ether for anæsthetic purposes with more stringent tests should be introduced. Experiments having shown that the solid potash test of the German Pharmacopœia for ether pro narcosi is too stringent, it might be replaced by the following: "If caustic potash in small fragments be kept in contact with the ether in a well-stoppered bottle protected from the light, no yellow colouration should be developed within one hour."

In regard to aloes it is recommended that the epithets *Barbadensis* and *Socotrina* be no longer used, the drug being described simply as aloes. The object of this is to discourage the use of Socotrine and Zanzibar aloes, and to encourage that of the better prepared Curaçoa (Barbados) variety, though either variety could still be used provided the product comes up to the standards laid down in the recommendation. Experiments are being carried out with amyl nitrite with a view to improving the description and tests applicable to it. Aqua destillata receives considerable attention; it may be thought that one distilled water is as good as another, but this is by no means the case, especially as regards its alkalinity and ammonia content. The recommendations made in regard to it are stringent.

Synthetic camphor has come into the market since the last revision of the Pharmacopœia, but it is recommended that it should not be officially recognised at present, as it is not identical with natural camphor. In order to exclude the synthetic variety the requirements should be made that camphor should melt at 175° C., and that a solution of 25 gm. in 90 per cent. alcohol, sufficient to produce 100 c.c. at 16° C., should exhibit an optical rotation of about +10° when examined in a tube 100 mm. long. Many practitioners would be sorry to see *Charta Sinapis* disappear from the Pharmacopœia; but it seems that it is possible that it may do so, for the Committee report that "if this preparation is retained the formula must be revised."

In regard to chloroformum it is recommended that as chloroform to which 2 per cent. of ethylic alcohol has been added keeps indefinitely and under all conditions, this addition should be made. The specific gravity and boiling point of this mixture are being determined.

Colchicum seeds vary so much in toxicity that it is thought advisable to standardise them. Standardisation would be by estimation of the colchicine present, and a method of determining this active principle is given in full. As an improvement upon the two collodions that are at present official, the following formula is recommended:

Pyroxylin	...	...	...	5 parts.
Oil of cloves	...	...	...	2 "
Amyl acetate	...	...	...	25 "
Benzene	...	...	...	20 "
Acetone to produce	...	...	100	"

* Printed, published, and sold for the Medical Council by Spottiswoode and Co., Ltd., London.

SURGERY.

GENU VALGUM.

GENU VALGUM, or knock-knee, is a deformity of the lower extremity, in which the internal malleoli are separated by a variable distance when the legs are fully extended at the knees. It may arise from one of several causes, but the varieties most commonly seen are those which are due respectively (1) to rickets and (2) to the rapid growth associated with adolescence, accompanied, as it is, by corresponding weakness of the periarticular structures. More rarely cases are seen which can be definitely ascribed to injury, inflammation, or paralysis.

Rickets accounts for the great majority of cases, but the exact manner in which the deformity is caused differs according to whether it comes on in childhood or later. When rickets causes genu valgum in the early years of infantile life before the child has begun to walk obviously no mechanical factor resulting from the assumption of the erect attitude can be called into play. In these cases the deformity is the direct result of rickety changes in the bone—i.e. bending of the shaft and increase in the thickness of the inner half of the lower epiphysis. But when it comes on in adolescent life, this simple explanation is not sufficient. Some authorities are of opinion that all adolescent cases are due to "delayed rickets"; but whether this be the case or not, it is at any rate certain that there is a mechanical element in their causation.

In the erect position the weight of the body is transmitted to the ground from the pelvis through the outer condyle of the femur to the sole of the foot. The responsibility for the prolonged maintenance of the upright position falls mainly on three structures, the ligament of Bigelow, the internal lateral ligament of the knee, and the structures supporting the arch of the foot. The former of these is one of the strongest structures in the body, and is quite adequate to withstand any strain that may be thrown upon it; but the internal lateral ligament of the knee is, comparatively speaking, weak, and tends to elongate, and thus genu valgum begins. The internal condyle lengthens secondarily, and the deformity thus becomes permanent. Later the foot is everted, the weight of the body being transmitted through the inner half of the arch, which is ill-fitted to bear the strain, and flat foot results. Advanced degrees of genu valgum are nearly always complicated by flat foot.

The chief results of knock-knee are a waddling, awkward gait, owing (1) to the weakness of the ligaments round the knee, and (2) to the liability of the internal condyles to knock against one another in the act of progression (hence the name of the condition). To avoid this the patient, as he brings his legs forward in walking, throws them outwards in a curious and characteristic manner.

The patient himself complains of difficulty in getting about quickly, and of the fact that he gets tired very readily after walking or standing for any length of time. The diagnosis is usually obvious as soon as the patient is seen to walk; but one word of caution is necessary. The patient may

refer all his symptoms to the feet, complaining only of pain in the sole owing to the secondary pes planus, and the primary cause of his condition may thus be overlooked.

On examining the patient it will be found that when the legs are extended and the internal condyles are brought into apposition, the malleoli are separated by a variable distance. Cases have been recorded in which the separation was more than 18 inches. If the legs are flexed the deformity immediately disappears. At first sight this would seem somewhat difficult to account for; but the explanation is that the enlargement of the internal condyle takes place in the vertical measurement only; the antero-posterior diameter is unaffected.

The treatment of genu valgum differs according to the age of the patient. In children who have just begun to walk, and in whom there is a slight degree of separation of the malleoli, spontaneous rectification of the deformity will nearly always occur if the child can be prevented from walking. This is no easy matter; but it can generally be managed by applying splints to the legs, the lower ends of which come well below the feet. Children have been known to attempt to walk even with this impediment; but if the projecting ends of the two splints are made of a different length, such a feat becomes well-nigh impossible. The only object of the splint is to keep the child off its legs. It is not necessary, nor is it desirable, to bandage the limb to the splint tightly in such a direction that a counteracting force is applied in opposition to the deformity. In children, in addition to the application of long splints, general treatment for the rickets must also be given, since genu valgum at this age is a manifestation of the disease in a more or less acute form. Such treatment resolves itself into the administration of cod-liver oil and directions for the proper feeding of the child.

If this treatment fails, osteotomy is the only proceeding likely to benefit the condition. In adolescent cases of any serious degree, it is generally advisable. But it should not be undertaken lightly. It should not be performed in a child under six years, nor unless there is a separation of the malleoli of at least three inches.

The operation itself is comparatively simple. The best operation is division of the shaft from the outer side. A sandbag is placed under the limb. A vertical incision is then made on the outer side. Its centre should correspond to a point two fingers' breadth above the upper border of the patella. The incision is carried down to the bone, and a keyhole saw introduced with which the bone is divided. Some surgeons prefer an osteotome, but a saw is less likely to slip and damage important structures. The wound is sewn up, and the operation is complete. It is better not to do both legs at the same time. In children it is preferable to put the limb up in a plaster or silicate bandage at the time of operation. In six weeks the plaster may be taken off and crutches commenced.

SOME UNUSUAL SWELLINGS OF THE ABDOMINAL PARIETES.

SWELLINGS of the abdominal parietes in the form of one of the varieties of hernia are, of course, of very common occurrence, but one occasionally comes across tumours and fluctuating swellings, quite unconnected with a hernia, whose diagnosis is not at all a simple matter. The first point which has to be made out is whether the tumour is in the parietes or is intra-abdominal and only causes a swelling by pushing forward the muscular wall in front of it; and the same difficulty presents itself in the case of a fluctuating swelling.

All such swellings should be examined first of all with the patient lying flat on his back and the abdominal muscles as much relaxed as possible. Many patients, especially nervous ones, persistently hold the abdominal muscles rigid; but it will generally be found that if the examination be conducted gently and without haste, the confidence of the patient may be gained and he will then relax the muscles. To ensure this it is a good plan to engage him in conversation during the examination, and so distract his attention from his abdominal wall, and it is also of some assistance in achieving this object to tell him to breathe in and out quietly. When the abdominal wall is relaxed, the mobility of the swelling can be estimated, *i.e.* whether it moves from side to side with the rectus abdominis or not.

If he is then told to raise his head from the bed, the muscles will at once contract, and a tumour, which is intimately connected with them, will become quite immovable. Or, again, if the tumour lies between the muscles and the superficial tissues, its outline usually becomes more distinct.

The patient should next be examined in the genu-pectoral position. In this way it can be ascertained whether the swelling moves with the abdominal wall in the antero-posterior plane.

Again, if the swelling fluctuates, the patient should be made to cough, and the swelling should be examined for the presence of an impulse. All fluctuating swellings of the abdominal wall, when examined in this way, will give an impulse which is communicated by the contraction of the muscles; but an expansile impulse will only be given by those swellings which are primarily intra-abdominal, and part of which has come to the surface either by thinning out the muscle wall in front of it or by eroding it.

Finally, the contour of the tumour should be carefully examined, as this may give an indication as to which muscular stratum it is connected with.

A rare form of solid tumour which occasionally occurs in the rectus abdominis is a diffuse fibroma. This starts as a localised swelling in one of the compartments of the muscle, and then tends to spread in each direction up and down. At each of the intersections of the muscle it is constricted, the appearance thus being presented of a chain of separate tumours, extending in advanced cases from the symphysis pubis to the costal arch, and it is sometimes known as a "desmoid" tumour for this reason. Excision of the mass is impracticable, since the rectus is completely replaced by tumour formation, and any attempt to remove it would result in excessive weak-

ness of the parietes and a subsequent ventral hernia. Fluctuating swellings in the neighbourhood of the umbilicus, other than a hernia, are not very rare, but are apt to be misleading, especially in adults. Occasionally the skin in this region becomes irritated or abraded, and septic infection of the subcutaneous tissues follows, leading to a peri-umbilical abscess. This causes a fluctuating swelling spreading from the navel in one or more directions. It exhibits all the phenomena of acute inflammation, *i.e.* it is tender, hot, and the skin covering it is suffused with a purplish-red colour. Incision and evacuation of the pus, followed by fomentations, will usually lead to a rapid subsidence of the symptoms. In infants a fluctuating peri-umbilical swelling is most often the result of tuberculous peritonitis; the disease starts in the mesenteric glands, which caseate, and an intra-peritoneal abscess is formed, which makes its way to the surface at the weakest spot, which is the umbilicus. Such swellings give a true expansile impulse on coughing. Unless they are opened early, they tend to burst spontaneously, and a chronic discharging sinus is left. Subsequent treatment consists in increasing the resistance of the child to the tubercle bacillus by vaccine therapy and improving its general health.

But while a tuberculous peritoneal focus, if it makes its way to the surface at all, usually does so at the umbilicus, it may rarely become superficial at some other spot; and then the diagnosis is a matter of greater difficulty. It may present in the epigastrium, where it may simulate a perigastric abscess, or in the neighbourhood of the cæcum, where it may resemble an appendix abscess. It is, of course, quite rare nowadays, when appendicitis is operated on as soon as diagnosed, to see a case in which an appendix abscess has been allowed to make its own way to the surface. But even now it is not unknown.

The introduction of antitoxin, especially diphtheria antitoxin, into the tissues of the abdominal wall is sometimes responsible for swellings in this neighbourhood. Some of these are due to the fact that the antitoxin is not absorbed but becomes encysted *in situ*; but more frequently the swelling results from injection with a needle which is not absolutely sterile, and a septic infection of greater or less severity is set up. When this occurs in the right iliac fossa the case may present superficial points of similarity to one of appendicitis, but the extraction of an accurate history should clear up the diagnosis. Quite recently the writer saw a child, aged six, with a diffuse tender swelling over the appendix, which the mother said had existed for four or five days. He looked ill, had vomited twice, his temperature was 101.5°, and his pulse 110. It transpired that the child had been discharged from a fever hospital a fortnight previously, where he had been treated for diphtheria with antitoxin. The swelling was incised, and proved to be an abscess of a not very acute type. It is presumable that in this case the antitoxin was not absorbed after injection, but became encysted, and that auto-infection occurred later. Immediately after operation the symptoms all subsided, and recovery was rapid and uneventful.

DISEASES OF CHILDREN.

THE BIOLOGICAL FACTOR IN INFANT FEEDING.

THE laws of animal life are just as applicable to the infant as to the young of other species. Each develops as the result of the fertilisation of a single cell, and in the early stages of existence the embryos of the higher animals are closely alike; specialisation is a later process. Similarly the young, after birth, normally live on the maternal milk until they are able to digest the ordinary diet of the adult of the species. Yet the adult diet may be herbivorous, carnivorous, or omnivorous. Either the maternal milk is of such a nature that it will develop the digestive organs in a special manner suitable for dealing with the future diet, or there is a biological potentiality at the basis of development which leads to the specialisation of function quite independently of the nature of the diet. Obviously the latter is the true explanation, for no amount of cow's milk fed to an infant will modify its stomach into any resemblance to that of the ox.

The elementary constituents of diet are the same in all animals, whether young or full-grown, but the biological need is that these elements are supplied in suitable forms and proportions. Oats and hay are natural foods for a horse, but just as unsuitable for man as meat and puddings would be for a horse. Even different species require similar foods in different forms or quantities. Grass and hay are digested in much larger quantities by the bovine than the equine species, because of the configuration of the stomach. There is a biological difference in the nutritive powers of the young during the stage of milk feeding. Were it not for this the milk of all animals might be used indiscriminately, leaving to the individual the choice of selecting what is requisite and discarding the remainder. To a great extent this is true, for with care an infant can be trained to digest pure cow's milk. Moreover, we frequently come across infants who have been fed on various diets, often apparently irrational, and yet have developed quite satisfactorily. Such a result is not surprising, for the divergence in character of the milk of different animals during the suckling period is not very great. And, as far as is known, the young of all animals secrete digestive juices which contain similar ferments and exert a similar chemical action on the food. Their digestive organs are practically identical at birth, though they develop very differently afterwards.

The maternal milk clots or curdles in the stomach in a manner suitable for assisting the development of the stomach. The woman, mare, and ass secrete a milk poor in casein, and the clot is fine and not coherent. Cow's milk forms a tough resistant curd which stimulates the motor powers of the stomach.

In the search for a substitute for cow's milk too much attention has been devoted to the chemistry of milk, and the problem has been regarded as mainly chemical, the biological basis being quite ignored. Comparisons are made between the results of various methods of feeding in which the

diet, though a modified cow's milk, is totally different from human milk. Milk is a living nutritive fluid with many biochemical properties. Take colostrum, for instance, and realise its importance. It is especially rich in antigens, bodies which stimulate the tissues to the production of specific antibodies of the class of agglutins and precipitins. According to Langer, there are no antigens in the blood of the new-born calf, but they appear in a few hours after suckling. They are very scanty in the blood of the calf if, instead of being allowed to suckle its dam, it is suckled by another cow which has calved a week or two previously. Recent experiments have further demonstrated the importance of maternal nursing during the first few days of life. Moro found that of guinea pigs artificially fed from birth 80 per cent. died, whereas if they were suckled for one day 40 per cent., and if for two or three days only 10 per cent. died under similar conditions.

Another important point is the presence of ferments, such as katalase and antibacterial alexins, and some antiscorbutic substance in fresh milk. These substances are readily destroyed by heat; and the staler the milk the weaker is it in biochemical properties. Chemically we make use of many varieties of casein in the various modification of cow's milk. The proteins consist of casein and soluble albumens, and there is a certain amount of support for the view that the albumens are merely nutritive, whereas the casein is essential for development. Casein is sometimes called caseinogen, calcium casein, or bicaseinate of calcium. With rennin it forms calcium paracasein, a soft curd which readily passes through the pylorus. In early infancy there is little or no hydrochloric acid secreted. Later, the acid formed acts on the calcium paracasein and converts it into a tougher free paracasein, which is acted on by pepsin. Casein forms with lime water, calcium caseinate; with bicarbonate of soda, calcium sodium caseinate; with citrate of soda, sodium caseinate and calcium citrate; with hydrochloric acid, casein hydrochloride. All these compounds are unacted on by rennin, and consequently their effect is to enable the milk to pass through the stomach without curdling. The digestion is then entirely intestinal. In these respects the milk can be manipulated so as to make it acceptable to the infant's stomach. The results again prove that infants, like other organisms, possess the power of adapting themselves to their food supply. It remains obvious that no modification of cow's milk can be regarded as identical with human milk, no matter how accurately the percentages of the different constituents is devised, for it is deprived of its bio-chemical properties. Maternal nursing remains unapproachable. But the biological factors of life enable the young to appropriate what is good and reject that which is evil in many apparently unsuitable diets.

PUBLIC HEALTH AND HYGIENE.

SOME ADVANTAGES OF A DECLINING BIRTH-RATE.

It is the fashion—a fashion doubtless based upon sincerity of purpose and conviction—to lament the decline in national fertility disclosed by the statistical returns of registered births. Each year the annual report of the Registrar-General records a further drop in the birth-rate and a practically unbroken process of continued decline to which it is subject. Now a statistical phenomenon is a mere abstraction of the barest content; it almost never in itself can be an object either of approval or opprobrium.

It is not self-evident that the fact of a declining birth-rate is an occasion for regret. Take the population of the world, or any natural division or artificially selected portion of it, as a closed social system, and it is evident that its state of well-being may demand, according to circumstances, either an increase or a diminution of its numerical proportions; or it may be that a balance has been reached in which, having regard to all the conditions, no benefit could result from either change. A stationary, advancing, or receding birth-rate would be variously judged accordingly as one or other of these stages in such a social system had been attained.

These speculative considerations, although the fact is not always appreciated, underlie any judgment as to the value of the increase or decline of the birth-rate. In considering the birth-rate, therefore, we are carried at once beyond the arithmetical expression to the actual facts which constitute the matter of real concern.

In dealing with the English birth-rate, we must inquire, first of all, whether it is necessary or desirable for the national well-being that the rate of increase to which we have become accustomed should continue. And this is a difficult and complex question to which an answer will not readily be forthcoming. Eugenic, political, economical, and many other considerations into which we cannot enter here, have to be taken into account before either an affirmative or negative reply is given.

Leaving this important aspect, we may with advantage inquire into the causes which are operative in bringing about a result as to the main value of which we suspend judgment.

The Registrar-General has for several years in his annual report given a table showing the movement of the birth-rate in relation to the number of women living at procreative age periods in England and Wales. These results as summarised in the annual report of 1907 are for 1876-1905:—

Birth-Rate per 1,000 females age 15-45 years.	Birth-rate per 1,000 females age 15-45 years.
1876-1880 ... 153.3	1891-1895 ... 126.8
1881-1885 ... 144.3	1896-1900 ... 118.8
1886-1890 ... 133.4	1901-1905 ... 112.5

From this table it is clearly seen that the decline in the birth-rate is due to a diminished fertility of women capable of child-bearing. When we turn to the Registrar-General's statistics of illegitimate births, we find that in 30 years the birth-rate of illegitimates

has declined from 14.4 per 1,000 unmarried or widowed females at procreative age periods in 1878 to 7.8 per 1,000 in 1907. So far as the general decline in the birth-rate is to be ascribed to this contributory cause it must be contemplated with satisfaction. Again, when we consider ages at marriage we find that there has been a marked increase in the age at which women enter into matrimony, and that as a result the number of years spent by women of child-bearing age in wedlock has been proportionately diminished. So far as this directly affects the birth-rate there will be few who will regret the loss resulting from a cause which has been accepted as a desirable change.

We learn from the Registrar-General's report, however, that the operation of these combined causes accounts for only 21 per cent. of the decline in the birth-rate. "There are sufficient grounds for stating that during the past 30 years approximately 14 per cent. of the decline in the birth-rate (based on the proportion of births to the female population aged 15-45 years) is due to the decrease in the proportion of married women in the female population of conceptive ages, and that over 7 per cent. is due to decrease of illegitimacy. With regard to the remaining 79 per cent. of the decrease, although some of the reduced fertility may be ascribed to changes in the age constitution of married women, there can be little doubt that much of it is due to deliberate restriction of child-bearing. The fact is also significant that at the last Census period, 1900-02, the fertility of English wives was lower than that recorded in any European country except France."

It is this "deliberate restriction of child-bearing" among English wives which has called forth the fulminations to which we have referred above. Although upon the whole question we are in no position to dogmatise, there is an aspect of it to which as hygienists we feel constrained to call attention. We consider a high infantile mortality as hygienically and economically unsound; and infantile mortality is only an extreme expression of inefficient breeding and nurture. The unaided mother of a family, even when she is fortunate enough to escape being a contributory wage-earner, can rarely do justice to the numerous progeny which she is naturally capable of bearing. If restricted child-bearing is compensated in improved mothering of a fewer offspring, and if smaller families mean a higher individual fostering and culture, a greater personal attainment and efficiency, the numerical decrease in the growth of population, most people will agree, will not be a high price for the purchase of so desirable a result. And we suspect that if it could be and were investigated, it would be found that this is the true meaning of the statistical phenomenon which is deplored. What we wish to insist upon is that it may or may not be deplorable, that conceivably it may be ground for gratification, and that in any case judgment must be suspended until the meaning of the phenomenon is made clear.

THE ROYAL ARMY MEDICAL CORPS SECTION.

THE TERRITORIAL REGIMENTAL SURGEON AND FIRST-AID INSTRUCTION.

Of the three lines of medical assistance given to the wounded in war, regimental aid is the first, and it falls to the regimental surgeon to train properly the men allocated for this work. Formerly two men were furnished by each company for it, but under the new Territorial Regulations it is laid down that one corporal and 16 bandsmen are to be detailed for this duty. To enable him to carry out the tuition of these men satisfactorily, as they will require some instruction in the leading facts of anatomy and physiology, the regimental surgeon will need diagrams and a skeleton, and for the loan of these he should make application to his Divisional School of Instruction. For the temporary use of a fracture box a requisition should be made to the A.M.O. of the division, as also for any bandages or other instructional stores required. The arrangement for the course and the hours of attendance should be made through the commanding officer of the regiment, so that the meetings of the class will not clash with the other engagements of the bandsmen.

As regards the scope of the instruction to be given, the regimental surgeon should bear in mind that the men of the class are being trained for a particular service and not for the general emergencies of everyday life. That particular service consists in being able to render prompt and proper first aid to the wounded, be they comrades or enemies. The basis of all such instruction should be that first aid has certain definite and fundamental objects, and that nowhere are these more clearly marked out than on the battlefield. Briefly they are the following: (1) The saving of life as by the arrest of bleeding; (2) protection against further aggravation of injury, as in the case of wounds and fractures; (3) relief of pain; (4) prevention of any unnecessary suffering, as from rough handling and moving. If the regimental surgeon will make the above four objects the groundwork of his teaching he will furnish instruction on the most important and necessary details of which regimental stretcher-bearers should have knowledge. Any regiment that has a body of men attached to it that are well-grounded in the arrest of hæmorrhage, are adepts in applying the first field dressing, and the use of fracture apparatus, and are skilful in the loading, carrying, and unloading of stretchers is possessed of efficient regimental aid. In the management of his class the regimental surgeon should remember that the non-medical mind is apt to be disheartened when it pictures, according to its own ideas, what first aid implies, but if it can be got to realise that the field of work involved in regimental aid is limited and that attention to certain clearly-marked lines of procedure can be the means of doing an incalculable amount of good this furnishes a stimulus and encouragement that are invaluable. Accordingly he should impress on his stretcher bearers how important their services are in the ultimate issue of the case. Further, he should keep constantly before them that what is needed to make them proficient is steady application to their duties, so

that they may gain the needed manipulative skill, rapidity of work being very desirable. In regimental aid time is everything in dealing with the wounded in a battle. If manual dexterity is wanting, much time is consequently spent on individual cases, so that the stretcher-bearers will be unable, from physical exhaustion alone, to meet all demands.

In dealing with the temporary arrest of hæmorrhage, the regimental surgeon should draw attention to the need for great care in this matter. There is a prevalent idea that all that is needed is the application of a tourniquet, but it should be pointed out that this latter is a mechanical contrivance, and that if precautions are not taken serious injury may be done to underlying structures if it is injudiciously applied. In the same way the stretcher-bearers should be got to realise how much the course of a wound depends in many cases upon its first treatment, and that consequently there is need for a proper dressing and for great care in its application. On these grounds the value of the first field dressing supplied in his kit to every British soldier on active service, should be emphasised and the importance of knowing how to use it and apply it. Again, when dealing with gunshot fractures the regimental surgeon should not lose sight of the fact that occasions arise when regular splints are not available, and that it is necessary sometimes to improvise extempore ones from materials available on the battlefield. Examples of the articles that might be so utilised should be given, and specimens of them should be shown as well as the recognised rifle splint for fractured thigh.

Important, however, as are the arrest of bleeding and the immobilisation of fractures in first aid, a matter of equal moment is the prevention of unnecessary suffering to the wounded by having them gently and carefully handled. Nothing is worse for an injured person than rough and needless movement. Hence the imperative necessity for the very thorough training of the stretcher-bearers in the loading, carrying, and unloading of stretchers with wounded on them. The new stretcher drill with six men in a squad cannot be followed in the case of regimental stretcher-bearers. Nor is it needed, because, as a rule, they will not be called upon to carry the wounded any distance. All that will be required of them is to place them in a position of shelter where they can be left until picked up by the bearer division of the field ambulance. In view of this, their stretcher drill should be that given in the manual with reduced numbers, and they should practise the exercises as laid down for four, three, or even two bearers. This will meet their case, and if they are also given a knowledge of the formation of hand-seats they will be sufficiently trained to meet any variety of circumstances that may arise.

The regimental surgeon, however, should not be content with the proficiency of the stretcher-bearers only in the drill-hall or on the parade ground. He should take every opportunity of exercising them under such conditions as would actually occur in warfare or in peace during training in field work.

TROPICAL DISEASES.

BERI-BERI.

Of the many different diseases specially found in tropical climates none perhaps is so obscure ætiologically as beri-beri. The latter may be defined as an endemic peripheral neuritis often associated with an extreme grade of dropsy and generally with implication of the heart. It is responsible for a very large annual mortality and morbidity in the Straits Settlements and other parts of the East. Many theories have from time to time been advanced as to its cause; for example, that it is due to eating diseased rice, that it is due to a staphylococcus, that it is a local disease due to emanations from the soil, that it is a primary disease of the duodenum, toxins elaborated here being absorbed into the system and so causing the degenerative changes in the peripheral and other nerves.

Lately the first of these ideas—the rice theory—has been advanced again by Dr. Braddon, State Surgeon of Negri Sembilan in the Federated Malay States, and he tries to show that it is only certain kinds of rice that are responsible for the production of the disease. Similar instances with other cereals are not unknown. For example, pellagra is due to eating diseased maize; ergotism to eating diseased rye; and "lathyrism" is a disease brought on by eating various kinds of *lathyrus* (chick pea or pulse). Braddon describes the chief ways of preparing rice in the East thus:—

I. Fresh Rice: the method of the Peninsula Malays. The grain, dried in the sun, is garnered in dark bins, and from this store sufficient for the

day's use is taken, and hulled by pounding it with a wooden pestle in a wooden mortar. Before cooking, the grain is washed carefully in water: this removes dust and other particles. Grain so prepared is said to be innocuous: the Malays who eat it do not suffer from beri-beri.

II. Uncured, stale White Rice: the grain collected from the natives is taken to mills and here is thoroughly dried, sifted to remove all foreign bodies, husked, hulled, or shelled, winnowed and screened. The completely stripped grain is next scoured, polished, and sized. The rice now, white, smooth, and clean, is distributed to different areas, and is ready for food. This kind of rice is dangerous to eat, and will in time produce beri-beri.

III. Cured Rice (the Indian method): Major Buchanan (quoted by Braddon) gives the details of this as follows: The rice is first soaked in water for about 12 hours; it is then put in earthen or iron vessels, mixed with water, and heated on a slow fire till the grains are burst. The boiled rice is next dried in the sun, and when dry the husks easily separate in the winnowing. In this method heat is used, and the grain is sterilised while in the husk, and so protected from the possible spread of any specific organism originally present on or in any of the seeds. Rice prepared in such a manner Braddon states is harmless. He brings forward a carefully selected series of statistics to support his contentions, and recent experiments with the two kinds of rice as food confirm his views.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

SULPHUR IN THE TREATMENT OF THREAD-WORMS.

By THOS. P. FLYNN, M.B., L.R.C.P. & S. (Edinburgh and Glasgow).

As I have nowhere come across an allusion to sulphur as a treatment for thread worms, the following experiences may be worth mentioning.

The first case was that of a man between 40 and 50 years of age who suffered from some skin affection for which a weak sulphur ointment was applied locally, and about 9 grains of sulphur were given daily by the mouth. The skin condition improved, but what attracted the patient's attention most was that he no longer suffered from thread worms, which had caused him great annoyance for years. He did not mention this complaint in the first instance, because, having been treated on former occasions for it without avail, he had come to regard it as incurable. His statement at the time was a surprise to me; but as he described the worms so accurately, and the conditions to which they gave rise, I could not doubt but that the sulphur given internally had cured him.

Another case was that of a married woman, who took nine B.P. lozenges every day for ten or eleven days. She wrote saying that she had "solid" comfort while she was taking them. This woman lived

at a great distance in the country, so that the remedy could not get a fair trial. A curious thing about this patient was that for two years while living in America she was absolutely free from the worms, but began to suffer again on her return home.

Nine grains of sulphur daily cured a man who suffered for a very long time from these parasites. His doctor prescribed injections of quassia for him, but, although he bought a syringe for the purpose, he never used it. Grown-up people are often shy of this remedy. A young child was completely rid of the worms in a week by $1\frac{1}{2}$ grains of sulphur *ter in die*.

The above cases show that sulphur is at least worth a trial, especially as it is so easily administered. Injections are inconvenient, are disliked by every class of patient, and are not always successful. In country districts where there are no trained nurses, injections, to be efficient, must be given by the doctor himself, and this means time and trouble. Under such circumstances sulphur, as has been said, is worth a trial, but perhaps it would be more effective if given in larger doses than the above.

MEDICO-LEGAL POINTS.

MEDICAL EXPERT EVIDENCE.—I.

MEDICAL men, when summoned before courts of law, may appear as ordinary witnesses, to state facts within their own knowledge, or as skilled witnesses to interpret them. In the former position their testimony differs in nothing from that of other persons, and is subject to the same rules of admissibility and interpretation. Their profession imparts no additional value to their testimony in such cases, for it is clear that they simply testify to those matters to which any equally intelligent layman might testify. In these cases their testimony is restricted to matters of personal knowledge alone, and their opinions become inadmissible. It is well to understand this at the outset, and the medical man, before going into the witness-box, should make certain in what capacity he is called. Both capacities are to a certain extent often united in him, but as a general rule it is not usual to call an expert to prove what an ordinary witness can, nor would he be allowed to if no reason of a scientific character existed to justify it.

But, on the other hand, when he takes his place as an expert before a court, a legal paradox is instituted in his behalf, by which he is allowed to testify not to what he knows, but to what he believes or forms an opinion upon, based necessarily on probabilities of analogy as well as experience. His testimony becomes a generalisation of facts, by means of which he undertakes to explain certain phenomena, or particular instances, as deductions from a law of common authority and government over such facts. He first generalises, and then abstracts, and his opinion expresses the degree of agreement between a general law and the particular subject of its authority.

In view of the immense erudition required to make a skilled witness in medicine, it follows that the high and responsible position occupied by the medical expert before courts of justice renders it indispensably necessary for him to possess the greatest measure of proficiency in those matters about which he is called to testify. And though he need not be a schoolman, nor skilled like a lawyer in dialectics and rhetorical fencing, he should at least be able to distinguish between the real and the apparent in those physical phenomena specially appertaining to that human nature of which he is the accredited minister and interpreter. Much of that wrangling over the taking of skilled testimony before courts, which constitutes the opprobrium of so many trials, may be attributed to a want of precision and candour in putting questions, and the consequent inability of witnesses to answer them clearly. There being always an *arrière pensée* to every question put by counsel, while the expert is confined to direct answers, his manner, whether brief and outspoken or halting and ambiguous, is ever liable to be misinterpreted, according as it approximates to or departs from the point intended to be reached by his examiner.

There is on this account among medical men a great sensitiveness and reluctance about appearing

before courts, for, besides being at times roughly handled in a cross-examination upon professional subjects by those of a different calling, their opinions are often disregarded by the jury, who pronounce a verdict directly antagonistic to the current of their testimony. To be summoned to express an opinion in a case, and yet not have that opinion form part of the purport of the judgment, seems to many little short of an insult. But this view involves an entire misapprehension of the duties and scope of testimony of an expert. He should understand at the outset that he is not called to express an opinion upon the merits of the case; that he has no proper concern in the issue, and by whichever party called he is in no wise the witness, much less the advocate, of that side. His testimony is invoked, in almost an impersonal sense, to explain the relations of cause and effect in certain physical facts that are in evidence before the court, and which relations, being unintelligible to the jury, require professional explanation at his hands in order that due weight may be given to the facts out of which they arise. His duties are properly limited to gauging the value of certain facts as they appear in evidence—facts whose importance to the issue cannot be determined without his assistance. But an opinion upon the relations of facts is not an opinion upon the truth of those facts. It is for him to decide the former; it is for the jury to decide the latter. For him to pronounce an opinion either upon the truth of the facts given him for interpretation, or upon the merits of the case, would be to usurp the province of the jury, and thus incorporate in his own person the functions of court, advocate, and witness. The witness cannot in strictness be asked his opinion respecting the very point which the jury are to determine. For instance, if the question be whether a particular act for which a prisoner is tried were an act of insanity, a medical man conversant with that disease, who knows nothing of the prisoner, but has simply heard the trial, cannot be broadly asked his opinion as to the state of the prisoner's mind at the time of the alleged crime, because such a question involves the determination of the truth of the facts deposed to, as well as the scientific inference from those facts. Yet he may be asked what judgment he can form on the subject, assuming the facts stated in evidence to be true. It is, therefore, from no desire to diminish either the importance or the value of medical testimony that courts are compelled to adopt such rules. And that they are wisely conceived must be apparent to all who will pause to inquire what would be the effect of allowing experts to usurp power which they might be tempted to use for the benefit solely of the party calling them.

In the examination of experts it often happens that neither counsel nor witness understand one another, each using terms of various signification, according to the import most usually given them by either profession. This necessarily produces ambiguity and confusion, a condition not undesired

by him who seeks to make the worse appear the better reason, but always to be reprobated in a court of justice, where truth rather than victory should be sought after. For these reasons the testimony of experts, constituting a most responsible branch of the law of evidence, since it is something higher than a mere oral recitation of facts, being an opinion *ex cathedra* upon the value of such facts, and thus quasi-judicial, is jealously criticised to see that it is tainted by no bias towards either party. Under a distorted phraseology the witness might easily be made to appear prejudiced, or an undue emphasis placed upon a statement of subordinate consequence might elevate it into the sphere of a dogmatic assertion. Interpreting an idea as expressed through language, or construing that language technically and etymologically, instead of in its usual and customary senses, may occasion wide differences of mutual comprehension, so that, in fact, throughout the whole examination of an expert, more even than in the case of an ordinary witness, the doctrines of liberal rather than close construction should be applied.

Opinions in general are not evidence, for they are plain and palpable violations of the germinal principle of all evidence, which is personal knowledge directly acquired. They are, then, either something more or something less. The Roman law, it would seem, speaking of physicians when called as

experts, evidently considered them more in the light of a day when juries were unknown, and the practitioner could easily merge his opinion in that of the expert, thus, in fact, converting the witness into the court itself (Maynz, "*Elements de Droit Romain*," vol. i. p. 348). Such a substitution as this was never contemplated at common law, where the provinces of judge, juror, and witness are strictly prescribed and most jealously guarded, and where any encroachment on the part of either would invalidate the judgment, or at least render it amenable to revision.

The opinion rendered by the expert witness should involve so much of special knowledge as to exclude it from the sphere of ordinary testimony, since, if it passes within it, the essential prerequisite element of skill is thereby destroyed, and the expert changes into an ordinary witness. And therefore no party is entitled to ask the opinion of a professional witness upon any question except one of skill or science. The more the ground of expert testimony can be narrowed and circumscribed, the easier it will be to obtain from its assistance intelligible and satisfactory results; while, on the other hand, the looser the system exhibited in introducing it before courts and permitting counsel to stretch it *ad infinitum*, the more confusing and useless it becomes, even if, through astute perversion, it does not work harm to both causes of science and justice.

NOTES ON CURRENT NEUROLOGY.

CONGENITAL MUSCULAR ATONY.

CONGENITAL muscular atony was first described by Oppenheim in 1900. A recent number of the *Gazette des Hôpitaux* contains a summary from the pen of Dr. Levi Sirugue of the present state of our knowledge of this disease. It is characterised by the following symptoms. It appears at birth, though it may at that time escape notice, and would seem to be in no way a family disease. Muscular atony is present without paralysis, and the limbs, especially the lower limbs, are the parts usually attacked. Sometimes, however, the muscles of the head and neck are affected. There is an abnormal laxity of the muscles, which allows of great exaggeration of passive movements. The eye muscles, those used for suction and deglutition, the respiratory muscles and the sphincters are, as a rule, unaffected. The muscles affected lack tone, but show no atrophy. Sometimes a hard, sleek, white oedema is present, called by Kundt "*fatty pseudohypertrophy*," and affects most commonly the vulva, thighs, and buttocks. Tendinous and cutaneous reflexes are almost totally abolished, but electrical and mechanical excitability of the muscles persists, and there is no reaction of degeneration. There is an absence of any troubles of sensibility, mentality, and functions of the senses. The evolution of the disease is retrogressive, and would seem, in typical cases, the exact opposite of that of Little's disease. As a rule, the muscles of the extremities, and principally those of the upper extremity, are the first to resume a normal condition, and the flexors, being

attacked to a less degree than the extensors, recover their strength the earlier. Although the prognosis is for the most part good, a few cases are recorded in which death ensued from broncho-pneumonia, hypostatic congestion, etc. There is still some obscurity as to the pathology of the disease. Oppenheim thought that it is due to a retardation in the development of the muscles, and that there is no disease of the central nervous system except a functional derangement of the anterior horn-cells. Bing, on the contrary, thinks that there is an arrested development of the medullo-cerebellar paths. Badonin is of opinion that the defect is in the peripheral neurone. Other observers have put it down to disease of the thymus, and noted the relation between a persistent thymus and the grave myasthenias. Again, the cedematous condition observed at times, leads Berti to think that it is akin to myxoedema. Yet another theory, that of Cattaneo, maintains that it is due to a lesion of some glands which exert an internal secretion. Treatment is usually effective, and causes rapid amelioration of the condition without, in the present state of our knowledge, leading to a complete cure. Since, however, the disease has only been seen in very young children, it must be cured spontaneously with age. Electrical treatment is efficacious, especially the faradic current. Baths and massage with arsenic and strychnine are useful adjuvants. The danger, especially with very young children, lies in the vulnerability of the respiratory system.

"THE HOSPITAL'S" COMMISSION ON BEERS.

A SPECIAL REPORT

ON

THEIR PREPARATION, AND THEIR CHEMICAL, PHYSIOLOGICAL AND DIETETIC PROPERTIES.

PART I.—THE CHEMISTRY AND MANUFACTURE OF BEER.

WE have previously, in two special numbers of *THE HOSPITAL*—April 7, 1906, and June 15, 1907—discussed at length the chemical and physiological properties of Whisky and of Light Wines. Both these alcoholic beverages are extremely ancient preparations of alcohol, but a careful review of the history of the subject tends to show that the alcoholic beverage to which the present report is devoted—namely, Beer—at any rate so far as these islands and Western Europe are concerned, is practically synchronous with the history of the inhabitants.

HISTORICAL.

The discovery of brewing has been ascribed to Gambrinus, the son of the German King Marcus, who lived 1730 B.C. The historian Pliny mentions the use of beer in Spain and in Gaul, stating that the natives who inhabit the west of Europe have a liquid with which they intoxicate themselves made from corn and water. He further states that this liquid in some parts is so well brewed that it will keep a long time; and finally laments upon the cunning of mankind in being able to gratify their vicious appetites by inventing a method whereby water itself can be made to produce intoxication. Historians in the Middle Ages frequently lament the addiction of the English to drinking, and at this time almost every monastery was famous for the excellence of its ales. One of the earliest spots at which the art of brewing was brought to perfection was Burton-on-Trent. The special fitness of the water at Burton for brewing, which, as a matter of fact, is due to its richness in calcium sulphate, was first discovered by some monks. The sale, however, appears to have been local until about the middle of the seventeenth century, when we begin to hear of Burton ale being drunk at special ale-houses in London. At this time the use of ale as a domestic beverage was practically universal, it being drunk both hot and cold. The introduction of tea, coffee, and cocoa, even when these articles were relative luxuries, at once began to diminish the consumption of ales. The new beverages also exerted an influence upon the quality of the ale drunk, as from this time forward the consumption of the old strong ales began to diminish and that of the lighter ales to increase.

BEER DEFINED.

Beer may be best defined as an alcoholic beverage, produced by the fermentation of a wort

derived from malt and other cereals or substitutes, and hops. Beer has two characteristics which distinguish it sharply from either spirit like whisky, or wines. It contains much less alcohol than wines—roughly, less than half as much, and *a fortiori* much less than whisky. Beer also contains a considerable proportion of nutritive substances other than alcohol, which is practically not the case with wines and spirits. This latter difference can be put strongly, and one will be fairly correct in saying that where, as in the case of some wines and all spirits, the only main material is alcohol, in the case of beer only a small part of its nutritive value is represented by its alcoholic content. An exception to this is perhaps provided by certain old specially brewed ales, the alcoholic content of which may run up high in proportion to their total solids. These ales, however, are generally drunk as wines, and are distinctly vinous in character.

WINES AND BEERS CONTRASTED.

Speaking generally, it would be correct to say that average beer contains half as much alcohol, and twice as much other nutritive material, as wine. The nutrient material contained in beer differs not only in quantity, but also in quality, from that present in wine. In wine the so-called extract or solid matter, or matter other than alcohol and water, consists mainly of nutritive substances containing carbon and hydrogen only, whereas in beer a not inconsiderable proportion of the solid matter consists of substances containing nitrogen, and indeed of albuminous or proteid substances.

A further difference between wines and beer is in relative acidity. This difference is both quantitative and qualitative. The acidity of beer is, roughly speaking, generally about one-fifth to one-tenth that of wine. It is further due to a different cause. The acidity of wine is for the most part due to acids and ethers of the fatty acid series, whereas the acidity of beer is due mostly to acid phosphates. A substance imparting some of its acidity to beer, and not without interest from the standpoint of modern therapeutics, is lactic acid. This substance occurs to a very slight extent in wine; if, however, in wine its quantity becomes considerable the wine is spoiled. In beer it is, in relatively considerable quantities, a normal constituent. The acid moiety in beer consisting of acid phosphates requires some further consideration physiologically. Although the acid phosphates are *ex hypothesi* acid in reaction, they play

physiologically a curious rôle, in that they have the power of fixing free acid, and being thus converted into phosphoric acid—a drug much used as a tonic medicine, and of considerable value. We have said elsewhere that we think nowadays the fetish of mathematical nutrient value is being unduly emphasised, and when all is said the public will have in the main what it likes, and in a considerable number of cases what it likes is what is best for it. Nevertheless, we can summarise our introductory remarks by saying that beer is *par excellence* the nutritive alcoholic beverage. The alcohol forms only part of its value, and the proportion of alcohol any given beer contains in no sense measures its strength. It is possible with some well-made lager beers to have a full nutritive beer combined with a low alcoholic strength. When a man drinks good beer he drinks and eats at the same time, just as when he eats a bowl of soup. The terms eat and drink are curiously but inconsistently used as connoting the difference between what is merely quenching our thirst and what is actually consuming nourishment. A man might more appropriately be said to eat beer than to eat certain kinds of soup, or indeed water-melon.

There are many varieties of beer on the market. Speaking roughly, the value of a beer is proportional to its original gravity, and increase in alcoholic strength should always go with increase in original gravity, though the converse is not true, as there are some good lager beers on the market with a high specific gravity and a low alcoholic strength. The main varieties of beer are the so-called mild ales, the bitter ales, the black beers (stout and porter), and lager beer. The general technique of brewing is the same for all these varieties, and we shall now proceed shortly to describe it, not with a view to enable our readers to brew for themselves, but to tell them how beer comes to be what it is.

MALTING.

The first essential process in brewing is malting. Malt is germinating barley, or, in common language, sprouting barley. Barley during germination develops several ferments. The biological *raison d'être* of these ferments is so to alter the constituents of the grain as to make them assimilable by the growing plant. The most important of these ferments is diastase, or a ferment which renders the starch of the grain soluble. In addition, ferments which convert insoluble into soluble proteids are also present, the so-called proteolytic ferments. The growth of the germinating grain is regulated by the extent to which the whole grain is moistened or steeped in water, and also by the temperature to which it is subsequently subjected, or, in other words, by the temperature of the malting floors. It may be taken generally that the size and nature of the sprout from the grain is a measure of the degree to which the glycolytic and proteolytic processes have progressed in the substance of the grain itself.

Now the brewer does not want to grow barley, but he wants to utilise the effect of the sprouting of the barley grain in making the substance

of the grain suitable material from which to make beer. If the germination were allowed to proceed indefinitely all the starch of the grain would be converted into maltose, and this would be used up by the growing plant, for which, of course, it was originally intended. The brewer does not want this to happen, as he wishes his beer eventually to contain dextrine, a substance intermediate between starch and maltose. When, therefore, he thinks he has got what he wants, he stops the process of germination. He does this by dry heat. In considering the question of brewing it must never be forgotten that the brewer, unlike the distiller, does not want to make practically pure alcohol. Technically the destruction of the germinating grain by heat is termed kilning. The flavour eventually possessed by the beer, as well as the amount of nutritive material other than alcohol which it will contain, is closely related to the exact manner in which this process of kilning is carried out. The malt is first dried and then heated to various temperatures. The dry heat kills the germinating plant, but only modifies the unorganised ferments present in the grain. These ferments, like the pepsin of the gastric juice, are capable of withstanding certain temperatures with only a temporary suspension of their activity, and can when subsequently placed under suitable conditions (moisture and temperature) re-exert their ferment action. The first stage in kilning is drying the malt, and this should be done at as low a temperature as possible. It is carried out on the kilning floor, which usually consists of perforated metal or tiles, the hot air being made to pass through the perforations. The next stage is to raise the temperature to a degree sufficient actually to kill the germinating grain. Not only is the germinating grain killed by kilning, but also the activity of the ferments, especially that of the diastatic ferment, is modified.

The brewer does not want a too active diastase, because, as will be seen later on, when he submits the malt, after grinding it, to mashing he does not want all its starch converted into sugar, but wishes to retain in his beer some of the bodies intermediate between starch and sugar, or, in other words, nutritive material not capable of being directly converted into alcohol by the subsequent treatment with yeast. The distiller has quite another object in view. In his mash he wants all the starch converted into sugar in order that by subsequently pitching with yeast he may obtain a maximum yield of alcohol. The brewer achieves his object, and obtains a not too active diastase by kilning at a higher temperature than the distiller and thereby reducing the activity of his diastase.

We are describing this small point of technique with a view of emphasising to our readers the fact that the actual presence of alcohol in beer is no more important than the presence of other nutritive elements, including starch derivatives, sugar, and intermediate products. Alcohol might quite well be regarded as a by-product in brewing, whereas it is practically the only product in distilling.

After drying and kilning the malt is brought to a

fine state of mechanical division by crushing, and is then ready for the second process in brewing—namely, mashing. In brewing black beer or stout a portion of the malt to be used for the mash before being crushed is roasted until it is of a dark brown colour. In ordinary stout making about 5 per cent. of this crushed roasted malt is used for the mash, and it is to this moiety of the mash that the dark colour and burnt sweetish taste of stout and dark beers are due.

MASHING.

For this purpose the crushed malt is conveyed by mechanical means to a large vessel termed the mash-tun. Thanks to Messrs. Bass, Ratcliffe and Gretton, we give a photograph of what is known at their brewery as the King's mash-tun, being actually the mash-tun in which the mash was made when His Majesty visited their brewery. The mash-tun is provided with a perforated bottom. When the crushed malt has reached the mash-tun successive doses of hot water are added to it. The average temperature of this water in English breweries is from 140° to 160° F., although the final dose of water is often at a higher temperature than this. The nature of the water used for mashing—i.e. brewing—is by no means a matter of indifference, and the original pre-eminence of Burton as a brewing centre was probably mainly due to its water being, on account of its mineral constituents, especially suitable.

Burton water is hard, and contains a high proportion—77.87 grains to the gallon—of calcium sulphate. The exact reason why a water of this nature is so suitable for brewing is not known, but it is interesting in this connection to note the manner in which recent research has emphasised the importance of calcium salts in catalytic processes caused by organised or unorganised ferments. In the process of brewing ferment action plays an all-important rôle, and it is probably in influencing favourably the activity of the ferments that the value of water rich in calcium sulphate consists.

It will be remembered that we left the malt at the completion of malting, having been dried and heated to a considerable temperature; in other words, with the germ killed and the activity of the ferments diminished and their actions suspended for want of moisture. By placing the malt in the mash-tun, we once more place it in condition under which its ferments can again get to work. Two important changes at once begin to occur in this mixture of crushed malt and water. The starch of the grain becomes mainly converted by the resuscitated diastase into dextrine and maltose and a series of intermediate bodies. At the same time the insoluble proteids contained in the crushed malt become acted upon by the proteolytic ferments and become converted into soluble proteids, mostly albumoses and peptones.

Before proceeding to follow the resulting sweet wort, as the finished product of the mash-tun is called, we must pause to consider an interesting by-issue upon which much depends. As a matter of fact, ground malt, when treated with water as we have just described, contains more diastase than

is required to convert its individual starch into dextrine and maltose, yet nevertheless in the best beers all the sugar contained in the sweet wort is derived from the malt of the mash, and consequently all the alcohol contained in the finished beer is thus derived. Beer production can be rendered more economical, however, if the sugar content of the sweet wort be increased either by adding sugar itself to the mash-tun, or by adding starch which will be converted into sugar by the excess of diastase present in the ground malt. By this means the amount of alcohol derived from a given weight of malt can be very largely increased. Beer thus produced is said to be derived from substitutes. The resulting beverage, if made from sound materials, is perfectly wholesome, but is essentially an inferior article to beer manufactured entirely from malt.

To return to the process of brewing where we left it, we have in the mash-tun a solution containing for the most part maltose, dextrine, and soluble proteids mixed with crushed malt. The next process is essentially simple filtration; the clear liquid is filtered through the malt *débris*, and this solution, varying as it does in colour according to the proportion of roasted malt used in the mash, is now submitted to the next stage of brewing, namely, hopping.

HOPPING.

From the mash-tun the sweet wort is pumped into the "copper," a large copper vessel. What essentially happens in the copper is that a decoction of hops is made with the sweet wort, or solution of



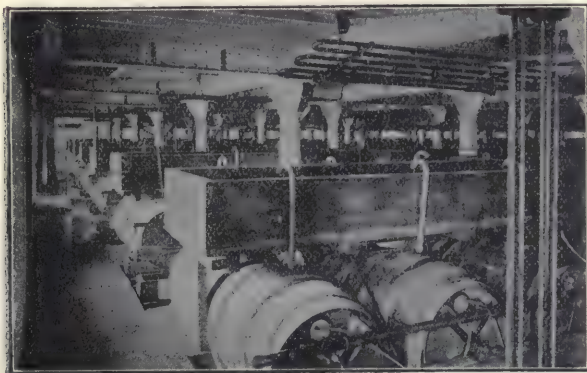
THE KING'S MASH-TUN.

dextrine, maltose, and certain proteids, as the extracting agent. A strong or a weak decoction may be made, much or little hops being added according to the desired characteristics of the finished ale. Some of the heaviest hopped beers are the black beers or stout, hops being added to these beers in as high a proportion as 6 lbs. to the barrel.

Hops as used for brewing consist of the specially dried and preserved unfertilised flowers and flowering tops of the hop plant, *Humulus lupulus*. The most important morphological constituent of the hops is the so-called lupuline. This is a bright yellow powder, and is actually a dried secretion from the glands of the hop. In this lupulinum are con-

tained the active principles of the hops in greatest quantity, and as is probably well known to our readers, lupulinum is actually official in the British Pharmacopœia, and is mostly given in two to five grain doses in the form of a pill. The main active principle of the hop is a volatile oil. This volatile oil is chemically a mixture of hydrocarbons and valerol; by keeping the hop this latter undergoes oxidation to valerianic acid, and this gives to hops which have been kept a peculiar and characteristic bouquet. The next active principle of importance is the hop resin, and with this is associated a bitter acid principle; a further substance of interest, according to some authors, is a basic body of alkaloidal nature, so-called hopein. Hopein appears to have a narcotic action allied to morphine.* A special form of tannin, so-called hop tannin, is also contained in hops, and this as will be seen later is of considerable importance in the technique of brewing.

It would be going beyond our purpose here to enter fully into the methods of drying and preserving hops, but they require extreme care if their bouquet is to be retained; as a rule in breweries they are kept in cold storage. We have entered



A CORNER OF ONE OF THE UNION ROOMS AT MESSRS. BASS'S BREWERY.

so far in detail into the properties of hops because it must be emphasised that while beer derives its dietetic properties from its dextrine, sugar, and alcohol content, *i.e.* from the malt, its medicinal properties are derived from the hops.

To return then to the hopping copper or the vessel in which the sweet wort is boiled with hops, three important changes happen to the future beer in this vessel. First it is boiled: this checks all further conversion of starch or dextrine into sugar; it also renders the wort sterile, killing all stray bacteria; and finally, it precipitates part of the albuminoid constituents. The second change that happens to the wort in the hopping copper is that the boiling extracts the active principles of the hops and brings them into solution. The third change is that certain constituents of the wort become acted upon by the hop tannin. These substances are mainly the albuminoids, and these become for the most part precipitated. After treatment in the hopping coppers the wort becomes darker in colour,

but clearer, still remains acid, and becomes possessed of a strongly bitter taste, and is known as the bitter wort, and should be quite sterile. Before being submitted to further treatment the bitter wort is filtered through the hops. The next process which it undergoes is cooling, and this is done in various ways. In some breweries it is cooled at once over a refrigerator and in others slowly in cooling tanks. The advantages of cooling in large open vessels are that the wort becomes aerated and that certain further precipitation of insoluble products takes place. The disadvantage, however, is that the wort becomes exposed to reinfection of stray organisms, although in modern breweries this rarely happens, and even after exposure to the air in the cooling tank the wort remains sterile, chiefly, no doubt, owing to its acidity and the anti-septic properties which it has derived from the hops.

FERMENTATION.

The wort as it leaves the hopping coppers, or rather the cooling tank, contains the same amount of fermentable sugar as when it left the mash-tun. The next object of the brewer is to ferment nearly all this sugar into alcohol. For this purpose the wort, which has a certain specific gravity, is conveyed into the fermenting backs or squares and is there pitched with liquid yeast or barm. The sugar in the wort is broken up by the yeast, and alcohol and CO₂ are formed in the process, the specific gravity of the wort being correspondingly reduced. The technique of the fermentation process in brewing is complicated, fermentation actually taking place in two stages, the wort during the second being at the same time separated from the frothy yeast, which has, of course, in the first stage multiplied enormously. In the making of English beers, as distinguished from lager, the total period of fermentation is about five days. It is very important during fermentation to regulate the temperature, and in English beer the wort usually goes into the fermenting backs at about 60° F., and during fermentation its temperature rises to about 75° F. In the case of stout the specific gravity of the wort is about 1,075 when fermentation begins and about 1,022 when it is complete.

The fermentation of lager beer is essentially different, and we shall describe this separately. Considerable difficulty is experienced in separating the fermented wort, or beer as it really is, from the frothy yeast, and to effect this purpose many appliances have been designed. The one most generally used at Burton is that known as the Burton union system. We give a photograph showing this process at work. After the first stage of fermentation is complete, which is ascertained by the gravity of the wort, the fermented wort is allowed to flow into a series of barrels, so mounted that they rotate axially; these barrels are fitted with a cooling apparatus, and also with a pipe and cock at their base for the removal of the finished beer. The striking feature about them is that at their upper surface they are provided with long tubes shaped like a swan's neck and fitting into the barrels through a bung-hole; these necks all bend over and give into a common

* Recent research has shown that hops also contain morphine.

gutter. The frothy barm, by virtue of the pressure behind and its lightness, eddies up through the swan necks and drops over into the common gutter, where it settles at the top. It must not be forgotten that fermentation is proceeding the while, and continues until this cleansing process is completed and, indeed as will be mentioned later, afterwards.

When the barm has separated, the beer in some breweries is allowed to settle in a settling tank, but in the majority of cases it is at once racked off into storage vessels or large vats, or trade casks as they are called. Very frequently a further dosing of hops is given to the beer in these casks, and this process is known as dry hopping. The best qualities of ale are allowed to remain in cask for varying periods from six weeks to three months. While in cask their alcohol strength slightly increases owing to the conversion of more sugar into alcohol, and they become bright and sharp owing to the absorption of the accompanying CO_2 . The cheaper varieties of beer do not remain in store, but are sent out of the brewery within ten or fourteen days of mashing. These latter are last of all subjected to what is known as priming and fining.

PRIMING AND FINING.

Priming consists essentially in adding a small quantity of sugar solution to the beer in cask. This sugar becomes rapidly fermented into alcohol and CO_2 by the active yeast which remains, and this last fermentation gives the beer an extra bright appearance and a sharp taste. Finally, some beers are fined before being sent out. The fining reagent is usually isinglass solution; this combines with the tannic acid compounds of the beer and causes a precipitation, and thus any insoluble or opaque-looking substances which may be floating in the beer are carried down. The barrels are subsequently rolled and the precipitate allowed to ooze out by the action of gravity. Beer as originally brewed was invariably of a muddy or opalescent appearance, but this, so long as beer was drunk in metal tankards, was not noticed by the consumer.

Nowadays, however, as beer is almost always drunk in glass, the public demand that the beer should look bright and transparent. Since beer in this country has to be kept at temperatures very apt to foster secondary undesirable fermentation, a preservative is almost universally added to the beer before it leaves the brewery. This preservative is generally a solution of so-called bisulphite of lime. This is practically a solution of SO_2 . Modern research has shown that the SO_2 so added combines with the aldehydic substances present in the beer, and forms with them compounds which, in the quantity in which they are present, are quite harmless.

BOTTLED BEERS.

In order to meet the exigencies of the retail trade at home and the enormous export trade, a very large quantity of beer is bottled. Beer to bottle well should be specially brewed, and should be more heavily hopped and stronger than ordinary draught beer, and further, it should be longer stored, or in other words should have undergone a more profound

secondary fermentation. * By this its alcoholic strength is somewhat increased; its content of the antiseptic principles of the hop is also somewhat increased; these two properties render it in a better condition to keep. Further, the CO_2 which it gradually absorbs during the secondary fermentation gives it a bright and sparkling appearance and a sharp and pleasant taste. All good bottled beers owe their properties to these qualities, and some of the bottled beers of the best makers, even after ten years in bottle, have a peculiarly pleasant and refreshing taste.

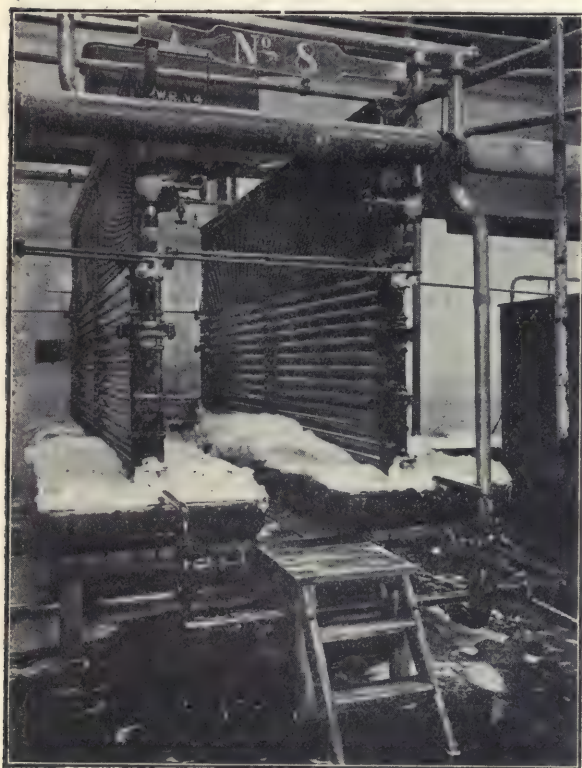
Unfortunately, however, the demand for cheap bottled beer has placed upon the market a very inferior article, from both the gastronomic and dietetic standpoints. This variety of bottled beer is produced by what is known as the chilling and carbonating process. For this product ordinary draught beer is taken, and when it is ready for racking is rapidly "chilled" or reduced to a very low temperature. This causes rapid deposition of suspended matter, which would under ordinary circumstances subside gradually during maturation. The beer is then bottled at a low temperature, with the result that it at once assumes a bright clear appearance. Subsequently, artificially produced CO_2 gas is pumped into the beer under pressure. Beer bottled according to this method when poured out looks bright, clear, and sparkling but is invariably thin, and when consumed is very apt to cause indigestion, owing to the fact that when it is submitted to the temperature of the stomach a considerable evolution of gas takes place; this not only produces distension and flatulence, but also actually irritates the gastric mucous membrane.

Those who have taken a CO_2 bath at Nauheim or Spa know how the bubbles of carbon dioxide gas liberated from the solution of the bath on the surface of the skin redden and irritate it. The mucous membrane of the gastro-intestinal tract is far more delicate and susceptible to irritation than the skin, and we know as a fact how solutions saturated with carbon dioxide under pressure will produce redness, congestion, and finally irritation of it. Just as thin or watery highly saturated solutions of carbon dioxide gas are irritants to the gastric mucous membrane and inhibit the secretion of the digestive juices and cause the transudation of mucus, which is actually harmful to the digestion, just so do viscid solutions containing a small quantity of carbon dioxide, which under the influence of the heat of the stomach is gradually evolved in a gaseous state, act as gentle and efficacious stimulants to the secretion of the digestive juices and to the movement of the stomach and thus act as aids to the digestion. In the case of viscid solutions the viscosity acts as a cushion between the bubbles of carbon dioxide gas and the gastric mucous membrane, and thus converts what would be a pathological irritant into a physiological stimulant. This is precisely what happens in the case of good bottled beers which only contain a moderate quantity of carbon dioxide gas, and which are full bodied or viscid owing to their richness in extract (dextrine and sugar) as compared with

chilled and carbonated bottled beer. These latter are thin like water and contain an inordinate quantity of carbon dioxide gas. We have entered into this subject in some detail because we consider it of importance, and feel convinced that the bad reputation beer has earned in some quarters as a dietetic beverage on account of it causing, when taken with meals, flatulence and gastric discomfort, is due to the fact that the beer in question was one of the thin chilled and carbonated bottled beers described above.

LAGER BEER.

The process we have described above is that of ordinary English brewing; German or lager beer is, however, brewed on a different principle. The characteristic of good lager beer is that it contains a



REFRIGERATING PLANT AT MESSRS. ALLSOPP'S LAGER BEER BREWERY.

high extract, and has a creamy mucilaginous effect on the palate, as well as a high nutritive value, and at the same time has a very low alcoholic strength. Dextrine and sugar solutions, even if they are heavily impregnated with the antiseptic principles contained in hops, are nevertheless relatively unstable, and especially is this the case if, as in lager beer, there is not present an adequate quantity of alcohol to assist in preserving the product. From this it follows that, however careful the brewer of ordinary English ale ought to be to prevent contamination with stray bacteria, the brewer of lager beer must be even more careful.

Hence, as we shall see in describing briefly the technique of lager beer brewing, the greatest

possible care is taken to render and keep the beer sterile throughout the whole process, and to still further pasteurise it in bottles. The main difficulty of the lager beer brewer in the past has been to produce a light and first-class beer sufficiently stable to fulfil without the aid of objectionable methods of preservation, the exigencies of the retail trade and reach the consumer in sound condition; Messrs. Allsopp have succeeded in doing this; we are indebted to them for the practical information which has enabled us to give briefly to our readers an account of the brewing of lager beer in this country. The great German lager beer breweries export large quantities of lager beer to this country, but in order to make quite sure of the product in question reaching the consumer in apparently good condition they often dose their export beer with a preservative—as a rule salicylic acid—and by no means always in unobjectionable quantity.

The technique of lager beer brewing differs in many important respects from that of ordinary English brewing. In the first place English beer is produced by what is known as the infusion and top fermentation method. These attributes are derived from the facts that in English brewing the mash is made by adding hot water to the grist, and the yeast during the fermentation process rises to the top. In lager beer brewing the crushed malt is mixed with cold water, and then a certain quantity of hot water is added until the temperature of the whole is about 60° F. Successive portions, about one-third at a time, of the mash are then transferred seriatim to another vessel called the mash copper, and here they are boiled. After each third has been boiled for a varying length of time it is returned to the mash tun. Matters are so arranged that the temperature in the mash tun never exceeds, but finally reaches about, 150° F. The resulting sweet wort is then filtered as in the English method, and at once transferred to the hopping coppers. It usually enters these coppers at about a temperature of 160° F.

It is advisable to pause here for a moment and consider in what way the manipulations practised in lager beer brewing affect the chemical composition of the wort. The successive boilings tend to produce three main results. They hamper the action of the diastase, so that in lager beer wort more dextrine and intermediate bodies are present in proportion to the maltose than in English wort. Further, those albuminoids coagulable by heat are more completely removed, the resulting wort being thereby clearer. The third change is that more of the original proteids are hydrolysed, or, in other words, converted into peptones and albumoses. As we shall subsequently see, the final product is relatively richer in these substances than English beer. But in the case of lager beer there is a very special reason for hydrolysing the proteids of the mash more completely than in the case of English beer. This reason is that the resulting wort makes a better nutrient medium for lager yeast.

The next process is hopping, and this, as in English breweries, is done in the hopping coppers. When the bottom of these are well covered with wort, hops are added. The contents of the copper are then

boiled for an hour. More hops are then added, and the boiling process repeated. As the bouquet-producing substances in the hops are volatile, the best hops are, as a rule, added last, in order to avoid loss of bouquet by evaporation. The average time for boiling ordinary lager beer is about two hours, but export beer is boiled about half an hour longer. The quantity of hops added varies considerably, but, speaking generally, English beer is more heavily hopped than lager.

The bitter wort thus produced is now cooled as rapidly as possible, not in cooling tanks, but over a refrigerator. This method of rapid cooling is adopted in order to run the least possible chance of the wort not remaining sterile. As a matter of fact, only one hour and a half is allowed to elapse between leaving the hopping copper and pitching with yeast.

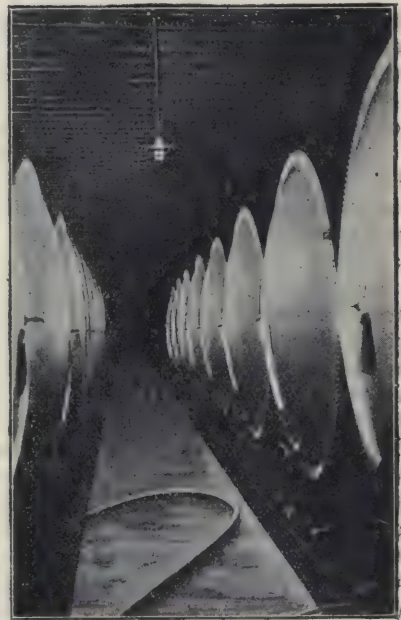
The process of fermentation adopted in the manufacture of lager beer is that known as bottom fermentation, because the yeast during fermentation does not rise to the top, as in the case of the English method, but falls to the bottom. Biologically, lager beer fermentation is characterised by the fact that it takes place at a relatively low temperature, and is continued for a relatively long time. It takes place in two stages—namely, in the fermenting backs and in the store barrels. The initial temperature at which fermentation is begun in the fermenting backs is 47° F. The beer remains in the backs from 9 to 11 days, and the maximum temperature reached is 52° F. This occurs about the middle of the fermentation. In order to prevent infection by stray bacteria all air is filtered. Formerly fermentation took place in vacuo, but this method has now been generally abandoned. The beer is separated from the yeast in the fermenting backs, and is then pumped into the store barrels, where it is allowed to remain at a very low temperature for three months. In the store barrels further fermentation takes place. After it has been in store for three months it is carefully filtered; part of the filtering plant consists of glass vessels, during its passage through which the beer can be observed. This is necessary, as it is interesting to note that the beer is actually never seen from the time it leaves the refrigerator until it appears, some three or four months afterwards, in the glass parts of the filtering plant. After filtration the beer is bottled or casked as may be required. All beer bottled at the brewery is pasteurised in bottle. In the case of the beer bottled elsewhere the barrels are conveyed in refrigerating vans to the bottlers.

STOUT AND PORTER.

The last kind of beer which we have to consider is stout or porter—porter simply being a weak stout.

The largest makers of stout, and indeed the largest brewers in the world, are Messrs. Guinness, who make, annually, stout paying a duty of approximately one million sterling. We shall consider the dietetic properties of stout elsewhere, and so far as concerns the technique of its production we have little to say, since it differs only very slightly from that of beer. The dark colour of stout is due to the fact that roughly 5 per cent. of the malt used for the mash is previously roasted. The hopped wort

is cooled by means of a refrigerator, and is at once submitted to the alcoholic fermentation, which, as in the case of beer, partly takes place in the fermenting back and partly in the skimmer or the apparatus in which the yeast is separated from the beer. After the stout leaves the skimmer it remains for twelve hours in what is called the settling vat, and is then transferred to the storing vat. The weaker varieties of stout, or so-called porter, are practically only consumed locally. These do not undergo storing, and are drunk within 14 or 21 days of mashing. So-called extra stout remains in the storing vat for about 14 days, and should be consumed within two months of bottling. Export stout remains in the storing vat for a year, and will keep good for years in bottle. This variety of stout is much richer in alcohol than the others, and is also more heavily hopped, about



LAGER STORAGE TANKS AT MESSRS. ALLSOPP'S.

6 lb. of hops being added per barrel of stout. London stout is produced in practically an identical manner, and, as will be seen from our analyses, is practically an identical article. An interesting difference in the technique of stout and beer brewing is that, as we have seen above, beer requires an initially hard water, whereas stout requires an initially soft water.

BEER COMPARED WITH TEA AND BEEF-TEA.

In the preceding section we have endeavoured to show how beer comes to be what it is, and it now remains for us to consider more exactly what it is. We cannot do better for the moment than compare beer to tea or coffee. Of every cup of tea that we take about 99 per cent. consists of water, the remaining part of drugs—namely, an alkaloid caffeine and an astringent principle tannin, and an aromatic principle or volatile oil. Of every glass of beer that we take from 89 to 94 per cent.

consists of water, the remaining 11 to 6 per cent. consisting of from 2 to 6 per cent. of alcohol, of from 1 to 5 per cent. of maltose, or malt sugar, from 2 to 3 per cent. of dextrin (the nutrient material contained in toast and biscuits and bread crust), and 0.5 per cent. of proteid or nutriment of the nature of meat. A cup of tea, including the milk and sugar, with which it is mostly drunk by the lower classes, costs about $\frac{3}{4}$ of a farthing, and is sold for anything up to 3d.; a glass of beer costs about two farthings and is sold from 1d. to 2d. or 3d.

As the view that beer has no nutritive value in itself and merely consists of a beverage upon which a certain portion of the community intoxicates itself is somewhat prevalent, we will finally compare beer to another beverage which has great repute as both a food and a stimulant—namely, good home-made beef-tea, containing a certain amount of meat residue, produced at roughly about the cost of 9d. a pint. This contains about 96 per cent. of water and about 2 per cent. of real nutritive material. It is true that the nutritive value of beef-tea can be greatly augmented by the amount of bread or toast consumed with it, but this is also equally true of beer, and it would be difficult to find a meal at once simpler and more nutritive than a crust of bread and cheese, or bread and butter, or both, and beer.

In the foregoing comparisons we have deliberately chosen two beverages which each possess the same advantage as beer in a respect that is often overlooked—namely, their chance of containing pathogenic organisms. This is practically nil. If we recall the epidemics caused by polluted milk, we shall perhaps grasp more clearly the advantages of a beverage prepared as tea and coffee and beer under conditions rendering pollution by infective bacteria extremely improbable. Our remarks must not be misconstrued; we are quite alive to the tremendous harm done by the abuse of alcohol, and the good done by sympathising with temperance; at the same time with the philanthropist's desire to improve mankind we have the scientist's regard for fact. Upon untruth no enduring fabric, however philanthropic its motive, can ever be securely built.

The fact is that good, properly made beer is a beverage containing a very small amount of alcohol and a relatively large amount of nutritive material. All beverages because they contain alcohol should not be regarded in the same light. The spirit nipper is committing quite a different act from the beer drinker; in fact, beer is much farther removed from the point of view of its alcohol content from some wines and all spirits than ginger-beer is from beer. The Revenue authorities exempt from duty any beverage containing under 2 per cent. of proof spirit, or, roughly, 1 per cent. of alcohol. Ginger-beer usually contains this amount, and koumiss, a beer made from milk by fermenting its sugar of milk with a special kind of yeast, contains slightly more. There are beers on the market containing 2 to 3 per cent. of alcohol.

CONSUMPTION OF BEER.

Beer is very largely and very generally consumed all over the civilised world. The Japanese consume a variety of beer made from rice. The production and consumption of beer in the United States has increased enormously during the last decade. The country which consumes the greatest amount of beer per head of population is Bavaria, the consumption there being reckoned at 40 gallons per head per annum. In the United Kingdom the *per capita* consumption has during recent years shown a distinct diminution. The average consumption per annum per head, for instance for 1887-1897 was 31 gallons, for last year it was 27 gallons, or little more than half that consumed in Bavaria. In the city of Munich, which is, so to speak, the German Burton, the consumption per head is very large, being 70 gallons per head per year, or about $1\frac{1}{2}$ pints per day for every man, woman, and child.

CHEMICAL COMPOSITION OF VARIOUS BEERS.

For the purposes of this research we have collected samples of beer from various sources and analysed them. Practically all the well-known brands of beer have been included in these analyses. We give below a table showing the results of these analyses.

As in the case of wines, there is no absolute chemical standard for what is a good beer or what is a bad beer, and one infers that a certain beer is good or

TABLE OF ANALYSES.

No.		Original Gravity	Alcohol by Weight	Total Solids	Ash. (Mineral Matter)	Maltose	Dextrine	Nitrogen	Phosphoric Acid	Total Acid	Volatile Acid	Fixed Acid	Maltose, Dextrine Ratio	Solids, Alcohols Ratio	Attenuation	Residue, Total Solids (M + D)	No.
1.	Allsopp's Lager (bottled)	1,044.8	3.88	4.14	0.33	1.02	1.56	0.088	0.021	0.086	0.059	0.027	1:1.5	1:0.93	64.3	1.56	1
2.	{ Ditto (draught)	1,052.1	3.45	6.85	0.23	2.03	3.27	0.088	0.045	0.092	0.048	0.044	1:1.59	1:0.50	47.3	1.59	2
3.	{ Ditto Dark	1,046.1	3.69	4.81		1.1	1.60	0.077	0.029	0.082	0.033	0.049	1:1.45	1:0.91	63.9	1.68	3
4.	{ Ditto Light	1,046.9	4.01	4.38		1.44	0.95	0.044	0.038	0.090	0.037	0.053	1:0.66	1:1.03	66.3	1.40	4
5.	Mild Ale (draught) ...	1,043.4	3.88	3.78	0.30	2.83	0.70	0.067	0.037	0.104	0.044	0.060	1:0.25	1:0.73	58.6	2.27	5
6.	Ditto ditto ...	1,054.1	4.24	5.80	0.49	2.01	1.28	0.068	0.079	0.118	0.064	0.054	1:0.64	1:0.96	64.5	0.47	6
7.	Ditto ditto ...	1,040.9	3.60	3.76	0.33	3.33	0.60	0.077	0.061	0.088	0.018	0.070	1:0.18	1:0.74	59.4	2.03	7
8.	Bass's Ale (draught) ...	1,060.8	5.02	5.80	0.36	2.13	1.60	0.076	0.049	0.098	0.044	0.054	1:0.75	1:0.86	63.1	2.07	8
9.	Allsopp's Draught Ale	1,055.1	4.55	5.27	0.29	1.60	1.70	0.078	0.052	0.112	0.063	0.049	1:1.06	1:0.86	63.0	1.97	9
10.	Bass's Pale Ale (bottled)	1,061.1	5.32	5.01	0.35	1.43	1.57	0.073	0.054	0.094	0.060	0.034	1:1.1	1:1.06	68.3	2.01	10
11.	Light Bitter (bottled)...	1,044.5	3.66	4.53	0.22	1.78	1.33	0.044	0.040	0.082	0.035	0.047	1:0.75	1:0.80	60.4	1.42	11
12.	Ditto ditto ...	1,047.5	3.77	5.09	0.20	2.47	1.44	0.064	0.047	0.076	0.022	0.054	1:0.58	1:0.74	58.1	1.18	12
13.	Guinness's Extra {	1,067.7	5.15	7.32	0.44	2.84	2.13	0.147	0.116	0.140	0.065	0.075	1:0.75	1:0.70	58.2 58.7 52.0	2.35	13
14.	Stout (bottled) ...	1,068.5	5.20	7.87		5.66	0.58	0.130	0.078	0.119	0.025	0.094	1:0.10	1:0.54			14
15.	Guinness's Extra {	1,074.7	5.70	7.89		2.18	2.82	0.141	0.110	0.157	0.059	0.098	1:1.3	1:0.72	59.2	2.89	15
16.	Stout (draught) ...	1,091.4	6.23	11.20	0.45	5.66	2.32	0.074	0.102	0.162	0.065	0.097	1:0.41	1:0.56	52.7	3.22	16

bad, as in wine, not from the quantity of any or all the constituents present, but from their proportion. Beer is a light alcoholic beverage, hence it should not contain much alcohol. The light beers should contain from 3 to 4 per cent., the bottled ales from 4 to 5 per cent., and the stouts from 5 to 6 per cent. Alcoholic strength should also increase *pari passu* with body, that is with total solids and flavour. Beer should froth well, and should leave a mucilaginous creamy sensation on the palate, and should be dry, not sweet, and not sharp in taste. These latter qualities depend upon the presence in beer of a proper proportion of dextrin, and of the ratio between this substance and the maltose present. In the best ales these two substances are present in approximately equal amount. A reference back to the description of the different processes of brewing will show how the proportion of these two substances can be varied. Dietetically a beer containing any considerable excess of maltose over dextrin is apt gastronomically to be mawkish, to lose its creamy mucilaginous effect on the palate, to be, volume for volume, less thirst quenching and more bilious. From these considerations arises the importance of the maltose-dextrin ratio as a criterion of good beer. The head or froth which forms on beer when it is poured out should not be of the nature of effervescence, but of actual froth, and should have a certain consistency and remain for a definite time. Those beers which have been bottled by the chilling and carbonating process give always a gaseous and bubbling head when poured out, and these beers we do not regard as sound from the gastronomic standpoint. Beer should not taste either sour or flat, but should have a good round flavour according to its kind (bitter or mild) of hops. Stouts have a special sweet and burnt taste, which many people like, and which is produced by the use of roasted malt. They should have more body than beer; their fulness of body and their "head" is a criterion to the experienced that their flavour is actually produced by roasted malt, and not artificially. Otherwise they must be judged by the same standard as beer. As we have mentioned before, the chief varieties of beer are the mild ales, the bitter ales, the black beers or stout and porter, and lager beer. Each of these must be judged on its own merits, and we shall, before criticising the actual beers we have examined, just consider their main characteristics.

The mild ales are the beers consumed mostly by the working classes, and exhibit a great variety as regards quality and gravity. Thus the ordinary London mild ales vary between a gravity of roughly 1,040 to 1,055. In Burton and in the Midlands, on the other hand, mild ales are produced with a much higher gravity. The ordinary mild ale of the working man in those districts runs up to a gravity as high as 1,072. Generally speaking, the mild ales contain proportionately more maltose to dextrin than bitter ales, and are possessed of a full sweet taste; the alcohol, as a rule, is not high. The bitter ales may be subdivided into two classes—namely, first, the light bitters and family ales of a gravity varying between 1,040 and 1,050, and the pale and stock bitter ales, which have a gravity of from 1,055 up to 1,075. Bitter ales are made both for draught

and for bottle. In their manufacture a finer class of material is employed, and they are of a more dextrinous and drier character than the mild ales. As a rule the proportion of alcohol and solids in them is higher than in the mild ales; they also contain more hops.

With regard to the *black beers*, these may be subdivided into stouts and porters or coopers. Broadly speaking, stout is a superior porter, or *vice versa*. As a rule the gravity of the stouts is very high, varying from 1,065 to 1,090, and even more. The gravity of porter is, as a rule, in the neighbourhood of that, or rather above that, of mild ales. Stouts are made both for draught and bottle, and here again we have distinct varieties, such as the Irish stouts and the London stouts.

Lager Beer.—There are two main kinds of this class of beer manufactured in the United Kingdom—namely, the Munich or dark type, and the Pilsner, or light-coloured, variety.

The characteristics of lager beer are a relatively low proportion of alcohol and a high percentage of solids. Lager beer is also relatively rich in proteid constituents owing to the occurrence during brewing of a high degree of proteolysis (peptonisation), all proteids which are not hydrolysed being precipitated by the heating processes, and subsequently removed by filtration.

CRITICISM OF THE BEERS ANALYSED.

1. *Light Beers*.—We will deal first of all with the light popular beers of the cheap variety, such as would be consumed by the masses. In the case of No. 4 the gravity is very low; the alcohol is higher than the solids, and there is a high maltose content. The nitrogen is also decidedly low. As might have been expected the attenuation is high. It is probable that in the brewing of this beer a considerable quantity of malt substitutes were used. In the case of No. 6 the gravity is also very low, the maltose preponderates largely, and there is a very small residuum of extract when the dextrin and maltose are subtracted from the whole. Here, also, probably a large quantity of malt substitutes have been employed.

Nos. 5 and 7 are fair examples of good-class London mild ales. In both there is a considerable excess of maltose over dextrin.

Taking next the Light Bottled Beers, it will be seen that No. 11 possesses about the same gravity as No. 1 (bottled lager). For this type of beer it will be noticed that, and especially in comparison with the lager, the maltose-dextrin ratio is high. The ash is very low, and the nitrogen also is very low. This beer (No. 11) is probably chilled and carbonated, hence the low nitrogen proportion. The flavour in this, and in other cases where chilled beers are compared with the naturally bottled matured articles, is not particularly good. In the case of another light bottled beer, namely No. 12, it is seen that the attenuation is rather low, and that there is a great excess of maltose. This excess of maltose in bottled beers is perhaps somewhat to be accounted for by the use of priming to assist in bringing to rapid condition.

It is interesting to note the wide variation in the gravity of the London mild ales, ranging as it does between 1040.9 to 1056.8. There is also considerable variation in quality, as might have been expected.

Of all the light beers Lager shows the lowest alcohol content and the greatest proportion of solids compared with alcohol. It will be noticed also that in the case of the dark lager particularly, the nitrogen is high, showing that peptonisation has proceeded further in this class of beer than in that of ordinary English brewing. This, of course, is a well-known fact. It will be also noticed that the proportion of dextrin to maltose is much higher in the lager beer than in most of the other types. In fact only in two cases in the British beers is the amount of dextrin more than in the maltose, namely in the case of two Burton beers, Nos. 9 and 10.

There are interesting differences between the Burton and London draught beers. Generally speaking, Burton beers are lighter in colour, are of higher quality, of higher gravity, and more highly hopped than the London beers. It may be generally assumed also that they are made from finer materials. Compare, for instance, a London and a Burton draught beer of similar gravity—for instance, No. 9 with No. 5 or No. 7—we find the Burton beer is more highly attenuated, and that it contains relatively more dextrin, and that the character generally is that of a more stable beer. This is largely due to the method of brewing and also to the greater amount of hops. Comparing the bottled beers, there is among them no London beer that can be compared with the famous Burton pale ales.

2. *Stout*.—The first point that strikes one in regard

to the stouts is their very heavy gravity. This heavy gravity means, of course, very large amounts of total solids and a considerable amount of alcohol; the solids to alcohol ratio is, however, higher than in the case of the lager types. There are interesting differences again between the Dublin and London types of black beers. The London beers are full and sweet and contain a large amount of maltose, whereas the Irish beers are more dextrinous and much drier to the taste. It is observable that the nitrogen and phosphorus contents of these beers are also very high.

With regard to Lager it may be said, comparing the lager beers with the other low-gravity cheap beers, that, although one cannot account for individual taste, there is no doubt that the lager beer is decidedly superior from most points of view. It is elegant, light and bright, nutritive, and of low alcoholic content. The low-gravity draught London ales can certainly not be described as elegant or superior from a gastronomic point of view. It may be fairly said, therefore, with regard to low-gravity light beverages that lager is a superior article.

As we explained elsewhere lager beer is an exceedingly fine product, requiring extreme care both in its production and, further, in its preservation. The import into this country of German lager beer is only rendered possible by, to some extent, sacrificing one of its most valuable characteristics, namely its lightness, and by the frequent use of salicylic acid as a preservative. A lager beer produced locally, and therefore independent of the exigencies of transit, is a distinct desideratum and possessed of obvious advantages over the imported product.

PART II.—THE PHYSIOLOGICAL, DIETETIC, AND MEDICINAL PROPERTIES OF BEER.

THE PHYSIOLOGY OF THIRST.

Having discussed at some length what beer is and how it comes to be what it is, we shall conclude our report by considering what are the dietetic and medicinal uses of beer. A mere glance at our analytical tables will make it at once obvious that beer, unlike tea, mineral waters and many other beverages, is not a pure stimulant nor a mere thirst quencher, but actually a food, and capable of supplying to the human body assimilable material of definite calorimetric or energy value. To speak first of perhaps the least important properties of beer, we may consider its value as a thirst quencher.

The *physiology of thirst* is, perhaps, a little more complicated than would appear on the surface. The most essential physiological basis of thirst, which, by the way, is one of the most distressing of human sufferings, far more distressing than hunger, as we know from the records of fasting experiments, is an actual want on the part of the body of fluid. By sweating (usually under muscular exercise), by excessive secretion of urine, by diarrhoea, or by any other means which has occasioned a loss of moisture out of proportion to in-take, thirst, or in other words the irresistible inclination to drink, may be produced. Thirst of this kind is invariably associated with the sensation of dryness about the mouth, the

pharynx, and the naso-pharynx, due essentially to the fact that, owing to the diminished quantity of water available for the wants of the body, the secretion of saliva, the natural moistening agency of the above parts, is much diminished.

ARTIFICIAL THIRST.

In contra-distinction to the above true physiological thirst, there exists nowadays what we may term a spurious thirst, or the sensation of thirst without the actual need on the part of the body for moisture. This thirst practically depends entirely upon dryness of the pharynx, the palate, the naso-pharynx and adjoining parts, and is in many cases due to a deficiency in quantity or quality of the saliva. This phenomenon often depends upon the vagaries of modern diet and habits, chief amongst which may be mentioned, first and foremost, cigarette smoking, the taste for highly spiced food, which is now fast spreading even to the fair sex, and last, but not least, the taste for mineral waters, and especially those supersaturated artificially with carbonic-acid gas. The products of the combustion of paper, the spices and salted almonds, the bubbles of carbonic-acid gas evolved from mineral waters, in their course down the swallowing tract all tickle for the moment our palates and we like them, but just

as surely as dropping water wears away the stone, so do these constant irritants destroy the secreting glands of those parts exposed to them and produce the dry-throated, husky or nasal voiced, and spuriously thirsty individual. Breathing through the mouth instead of through the nose by causing a constant current of drying air through parts which should be devoted to taste, tends still further to make the mouth and throat dry and increase thirst.

THIRST QUENCHING.

Whatever may be the kind of thirst from which we suffer, to assuage it fully we must get and keep the palate, the pharynx, and the naso-pharynx moist. We can best do this by simultaneously producing two phenomena. Firstly, by choosing a drink which will cover the above parts with a gummy or mucilaginous film, and thus prevent them from losing to the air what moisture they possess; and, secondly, by choosing a drink of such a taste as will in the course of swallowing reflexly stimulate the secretion of saliva. Either of these agencies will separately quench thirst, but they will do so more completely when they can act together.

Sugary and gummy solutions to some extent quench thirst by means of protecting the mucous membrane from drying, but they are not really good thirst quenchers because they have no reflex stimulating effect upon the secretion of saliva. Beer and some of the bitter mucilaginous infusions have the same mechanical effect in keeping the mucous membrane moist as the gums and the dilute syrups, but in addition to this, by virtue of their bitter taste, the former stimulate reflexly the secretion of saliva, and thus cause a flow of the secretion specially designed to keep the mouth and throat moist. To obtain the maximum thirst-quenching effect from beer it should not be swallowed too quickly, and a beer should be chosen possessing a relatively large quantity of total solids, and especially of dextrine, and also possessing a clean bitter taste. Thin, highly effervescent ales should be avoided as they are spurious thirst quenchers, the rapidly evolved bubbles of carbonic-acid gas cooling the pharynx and palate for the moment, but subsequently irritating it and making it drier than before. One of the best thirst quenchers is good lager beer. This is light in alcohol, but strong in taste and rich in dextrine.

EFFECT OF BEER UPON DIGESTION.

Beer, if taken alone, is rapidly absorbed from the stomach. Fairly exact experiments have shown that half a pint of beer when taken by itself leaves the stomach in little over an hour, in fact practically as rapidly as water. From this we may assume that a glass of good ale between meals is an easy method of supplying energy to the body.

Beer when taken with meals appears slightly to retard gastric digestion, so far as experiments *in vitro* are concerned. In the living individual, however, this retarding influence appears hardly to exist, and quantities of beer up to a pint are practically without influence. Indeed it is probable that bitter ale taken with meals, by virtue of the stimulant action it exerts upon the secretion of gastric juice, actually promotes gastric digestion. Here, again,

the kind of beer taken is by no means without influence. We should at once preclude the use of artificially highly carbonated bottled beer, and suggest that the best beer is one with a high extract value in proportion to its alcohol, and also one in which the dextrine is equal, or approximately equal, to the maltose. In certain patients beer when taken with meals tends to produce flatulence. We are quite sure in many of these instances the patient or his doctor has not discriminated sufficiently between the different kinds of beer. Beer, however, is not likely to suit patients suffering from fermentative dyspepsia or patients suffering, as the above patients generally do, from considerable gastric dilatation, as it obviously contains a considerable quantity of fermentable material which, if it remains for long in a dilated stomach already richly infected with stray fermentative organisms, must undergo fermentation, which will result in the production of much carbon-dioxide gas and acids such as acetic. If, however, in these patients, who are frequently emaciated, special means are adopted to get in the first place a diminished activity of these fermentative organisms by the use of suitable antiseptics, and in the second place a rapid emptying of the stomach by means of position and massage, beer, and especially stout, may be used with advantage as a tonic and nourishing agent. In simple hyper-chlorhydria, or that form of dyspepsia characterised by an increase in the proportion of hydrochloric acid in the gastric juice and accompanied by pain, most marked an hour before meals and not associated with dilatation of the stomach, good beer and stout may be used as food and, indeed, as remedial agents. Their gummy content soothes the irritated gastric mucous membrane, and their acidity, due as it is mostly to acid phosphates, is practically without influence.

THERAPEUTIC USES OF BEERS.

In prescribing beer or stout we must never forget that we are prescribing foods, part of the food value of which is due to alcohol and part to carbo-hydrate material, and that in this form both these food-stuffs are diluted with a large quantity of water, and hence considering their food value are relatively bulky. From this it follows that we must not prescribe beer or stout for any patient in whom either alcohol, carbo-hydrate, or a relatively large quantity of liquid are contra-indicated.

It is unnecessary here to specify individual diseases, but, speaking generally, we may say that beer and stout are not suitable foods for the obese, for the subjects of renal disease or glycosuria or diabetes. Before leaving this medicinal aspect of the subject, a special use of beer and stout, and especially the latter, must find mention. We refer to their hypnotic action. Stout is one of the most harmless and best hypnotics we possess, and is often far more efficacious in the treatment of insomnia than drugs. Precisely how these substances act we do not know, but part of their action is certainly due to the hypnotic principle contained in hops, and the more heavily these beverages are hopped the more marked is their hypnotic action. An average dose for the purpose is half a pint, and

this should be taken last thing at night, as long after an early dinner or supper as possible.

We have said so much in what has gone before concerning the food value of beer and stout, both from the chemical and physiological standpoint, that we need add but little here. Beer and stout must be regarded as the most nourishing alcoholic beverages we possess, and whatever may be said concerning the value of alcohol as a food, there can be no question of the food value of beer and stout. They contain all the elements of a typical diet with the exception of fat, and in a proportion approximately physiological. If we are content to measure the worth of a food by its calorimetric value, the fact is that a glass of good ale is approximately as nourishing as a glass of milk, and that a quart of good beer is equivalent to nearly a quarter of a pound of bread. Amongst beers good lager beer stands in a special position, because from the alcoholic standpoint it is light and from the nutritive standpoint it is heavy. It has been approximately estimated that the number of calories or energy equivalents required by an ordinary working-man *per diem* are three thousand; a quart of good beer,

quite apart from its alcoholic content, contains in itself one-sixth of the total energy required daily.

FINAL CONSIDERATIONS.

In the foregoing pages we have endeavoured to place the medical man as concisely as possible in possession of the facts concerning the manufacture, dietetic properties and medicinal uses of beer and stout, and have also, we hope, enabled him to discriminate between the bad, the good, and the indifferent. All flesh is not the same flesh, equally surely all beer is not the same beer; and just as the medical man often has occasion to prescribe one kind of proteid food for one patient, another kind of proteid for another, so to get the true effect of malt liquors must he be able to discriminate between them. We feel sure that many of the evil dietetic effects which have followed the use of these beverages have been due to the consumer having been supplied with beer or stouts of an indifferent character. Beer and stout of proper quality and given in proper dose, and used in suitable cases, will be found amongst the most useful dietetic and indeed medicinal agencies we possess.

MEDICAL ANTIQUITIES.

THE DOCTRINE OF SIGNATURES.

It would appear to be one of primitive man's inherent beliefs that casual connection in thought equals causal relation in fact—the most infrequent of coincidences, analogies utterly superficial or wholly subjective, strike him as having great practical significance. He constantly confuses subject with object, too, and for an explanation of physical facts nearly always turns to the supernatural. The truth of this quartette of anthropological common-places is seldom better shown than in early medicine. When Apollonius of Tyana treated delay in labour by making the husband carry a hare round and round the patient, he may well have been acting in good faith and with fair expectation of success. Reasoning on the same lines, a student of Æsop might have amended the treatment by substituting a tortoise, reserving the former animal rather for a case in which danger was threatening the perineum. Again, those who gave the name "eye-bright" to a certain plant earnestly believed that the black pupil-like spot in its corolla was placed there by a benevolent Providence as an indication for use in diseases of the eye. The name of this curious belief in therapeutic symbols is the doctrine of signatures. Obviously, considering the complexity of nature, its followers had the advantage of a large pharmacopœia; no doubt at all, too, they could point to some good results. Yellow turmeric might fail of an immediate effect on jaundice, but probably before many other non-poisonous and not too outrageously unpalatable substances of the right hue had been tried, catarrh of the bile-ducts would have yielded to the inexpugnable *vis medicatrix* of long-suffering nature. We know now that hæmorrhage of itself makes the remaining blood more coagulable, and so are in no doubt as to how the bloodstone stopped bleeding. Walnuts are rather like the cerebral convolutions to look at, and

possibly, even among the not very distant descendants of the precibiculturists, may also have been a good diet for lunatics. An often quoted example of treatment after the doctrine of signatures is that of John of Gaddesden, who claimed to have recovered Edward II. of smallpox by wrapping him in red flannel. With the same object of bringing out the rash red substances, like rose-leaves, were mingled with the patient's drink. This recalls the highly unpoetical comparisons in Dryden's early lines on the death of Lord Hastings from smallpox.

"... which through's flesh did sprout

Like rosebuds, stuck 'i the lily skin about."

The fallacy of reasoning underlying all these grotesqueries is hardly extinct yet, an instance being in evidence about the time that tomatoes were becoming a common article of diet in this country. A tomato when cut resembles rather the section of a carcinoma, and so the one was rumoured to be the cause of the other. Tomatoes and cancer is, of course, not quite on all-fours with walnuts and lunacy, but still even here the homœopathists might have risen to the occasion. Happily medicine has ceased to have anything to do with metaphysical vapourings, but nevertheless it should make better acquaintance yet with logic. In a common disease like consumption (the natural intermissions of which have made many a quack's fortune) the list of measures which have "done good," whilst regrettably long, is still being added to. As Whistler caustically remarked, a man may be misled by "an overwhelming conviction of right"; and all the more easily if he has been encouraged to entertain a good opinion of himself. The *ipsi dixit* of eminence is no substitute for rational proof: in his own day and country, there can have been no more eminent clinician than John of Gaddesden.

"THE HOSPITAL" MEDICAL BOOK SUPPLEMENT.—No. XVII.

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MEDICINE.

AN INDEX OF TREATMENT. By Various Writers. Edited by ROBERT HUTCHINSON and H. STANSFIELD COLLIER. Fourth Edition. (Bristol: John Wright and Sons. Pp. 926. Price, 21s. net.)

THE fact that this book has reached a fourth edition in the space of sixteen months speaks for the public estimation in which it is held. And indeed its popularity is well merited, for it fills, and fills efficiently, a relatively empty pigeon-hole in the vast library of medicine. Advancing knowledge in matters of diagnosis and pathology has left the poor student with scanty time to devote to the learning of treatment, except in bald outline; and this although everything else that he learns is in its essence but ancillary to treatment. That is to say, the end, under existing circumstances of student-life, is made subordinate to the means; a topsy-turvy state of affairs, but one not easily avoided. This applies more particularly to medical than surgical matters, for it is undeniable that surgical treatment is better taught than medical, chiefly because it is so much more defined and circumscribed. The minor medical ailments, on the other hand, which bulk so large in practice, inevitably meet in hospitals with a somewhat cavalier reception, partly because they are overshadowed by graver ones, partly because the mass of work leaves no time for their detailed consideration. In consequence a man who knows well enough, it may be, the technique of the operation for intestinal anastomosis (which he is quite unlikely to be called upon to perform) may well go into practice ignorant of the way to manage a neurasthenic patient who presents some intrinsically trifling symptom, or a baby that is constipated and keeps the household awake all night. And these are certain to meet him. The minutest details of treatment must in the nature of things be learnt by experience, but such a book as this, which offers within a reasonable compass a *précis* of the most recent treatments compiled by masters in their own subjects, cannot fail to be an asset to every practitioner. Now and then, as is to be expected in a book from many pens, one comes across contradictory opinions. For example, in Dr. Milne Bramwell's temperate and judicious article on "Hypnotism" we read: "As far as my experience goes, the employment of hypnotism by medical men acquainted with the subject is absolutely devoid of danger." In the succeeding article upon "Hysteria," an excellent one, from the pen of Dr. Risien Russell, we are told that hypnotism is a most potent agent in the treatment of the affection, but that "it labours under the disadvantage that it may be responsible for increasing the mental instability, and even for producing more serious mental derangement." But such antagonisms do not detract from the value of the articles, for their existence merely evidences the fact that upon the disputed points expert opinion is still labile. Decidedly the book is a most valuable one.

DISEASES OF THE DIGESTIVE CANAL. By Dr. PAUL COHNHEIM. Edited and translated from the second German edition by DUDLEY FULTON, M.D. (J. B. Lippincott Co. Price, 16s. net.)

THIS volume is very clearly printed in large type, and it is written in a dogmatic style which will commend itself to many practitioners. It restricts itself to diseases of the œsophagus, the stomach, and the intestines, without entering upon those of organs such as the liver and pancreas, whose ducts open into the alimentary canal. It deals at length with laboratory methods for investigating gastric and intestinal products, and it also gives clear accounts of symptoms, differential diagnosis, and medicinal and other non-operative treatment. As is almost inevitable in any such work, there are several points in Cohnheim's book with which we and many other readers do not agree. At the same time, it contains many helpful suggestions of which practitioners will be glad. It is true that it deals very shortly with some subjects which it might be expected would be described at length. Appendicitis, for example, is dismissed in about five pages. So rapidly is every branch of medicine and surgery advancing nowadays, that any translation is almost certain to be already a little out of date by the time it is in print. This applies, we think, to the present volume. Nevertheless, upon the whole it is a work which those particularly interested in diseases of the digestive canal will be glad to refer to, and possibly to own.

SOURD MILK AND PURE CULTURES OF LACTIC ACID BACILLI IN TREATMENT. By GEORGE HERSHEY, M.D. 2nd impression. (London: H. J. Glaisher. Chicago: Keener and Co. Pp. 32. Price, 1s. 6d. net.)

THIS is to all intents and purposes an essay or paper in book-form upon the cure of diseases by lactic acid ferments, written in the enthusiastic and exaggerated style so familiar in connection with new varieties of treatment. The booklet is divided into three parts. The first treats of the main points about auto-intoxication and intestinal putrefaction. The second part deals with the selection and preparation of lactic acid ferments for use in practice. The author finds faults in the use of commercial Yoghourt prepared with the Maya ferment; all commercial soured milks; liquid cultures of bacilli for internal use; liquid cultures in tubes for souring milk; and many of the various dried cultures on the market. He insists upon the importance of the Bulgarian bacillus of Boucard, with or without a strepto-bacillus, which may be added to render the taste more agreeable by preventing the saponification of the fat of milk. He lays down practical rules for the selection of the tablet or powder that is best. He gives his tablets by the mouth, not hypodermically, which is a favourable point. The third part considers the various maladies in which, according to the author, the Bulgarian bacillus treatment is indicated.

SURGERY.

ESTIMATION OF THE RENAL FUNCTION IN URINARY SURGERY. (By J. W. THOMSON WALKER. (London: Cassell and Co. 1908. Pp. 275. Price 6s.)

THERE is a great deal in Mr. Thomson Walker's book that must be read with interest by all who practise urinary surgery. For one thing it affords a short cut to acquaintance with the literature of the subject; for another it offers practical instructions for the application of many unfamiliar diagnostic or discriminative procedures. Let us add, too, that in the description of cystoscopic manipulations and the use of segregators, all that could be expected within the limits of so few pages is well accomplished. At the same time the book does not entirely carry conviction. Many of the methods for estimating renal function, clever and ingenious as they are, introduce so many variables that the problem admits of only the most dubious solution. To take as an example the value of evidence as to renal function derived from observations of the time of appearance of a colouring substance in the urine after exhibition of a drug. There is first of all the uncertainty due to wide limits in the rate of elimination by "healthy" kidneys; then there is the opportunity for error arising out of deputed observation in the collection of the urine; again, there are the difficulties of determining the collateral effects of diet, temperature, and the psychic condition of the patient. As matters stand at present it is a question whether the game is worth the candle. Of course the author does not claim anything like perfection for the methods he describes and advocates; he has, indeed, a chapter on fallacies, and he disarms criticism to some extent, in his preface, by intimating that the present work is preliminary to further study. We must not be understood to detract from the value of this initial work at an important subject, recorded in this book if we say that his further experience will lead him to discard a good many methods now on their trial with him, as cumbersome and insufficiently productive. About half the book is taken up with methods for the differentiation of the shares of the two kidneys in the total urinary function of any given case, and is so obviously founded on continuous and extensive practice that it will make a useful manual for those who desire to become expert in the use of instruments that, in any but expert hands, are misleading, if not dangerous. The volume is well printed, well illustrated, has a satisfactory index, and, it may be mentioned, gives ample acknowledgment of the source of information from other workers in footnotes.

MANUAL OF OPERATIVE SURGERY. By H. J. WARING, M.S., M.B., B.Sc., F.R.C.S., Senior Assistant Surgeon St. Bartholomew's Hospital. Third edition. Pp. 750 + xxxii. with 521 figures, several in colours. (London: Henry Frowde and Hodder and Stoughton. Oxford Medical Publications. Price 12s. 6d. net.)

Mr. Waring's excellent "Manual of Operative Surgery" has for the past ten years occupied a special place among the many works devoted to this subject, and a third edition scarcely needs a detailed description to introduce it to the medical profession. Although small in size, its range of information is quite sufficient for the needs of most students and general practitioners; while for those engaged more especially in operative work it provides a useful summary of all ordinary procedures, and may be used with advantage as a compendious adjunct to the larger and more inclusive systems of operative surgery, most of which are published in several volumes at a proportionate cost. The first two editions of this manual, issued eleven and five years ago

respectively, showed that it was possible to provide in one handy volume a clear, readable and practical text-book, profusely illustrated, which would be sufficient, not only for a full course of formal instruction in operations upon the dead-body, but also as a useful guide to the corresponding operations as performed in the theatre on the living body. The opening chapters, devoted to preliminary generalisation, and to the preparations and equipment necessary for operations, are very much as before, and supply sound information in small compass. The new illustrations are clear and instructive, and add to the value and appearance of the volume. In spite of many necessary additions the size and weight are much as before, and the work is still entitled to be styled a "hand-book"; but it is probable that any further increase in scope and illustration, or any further elaboration of detail, however useful, would detract from the value of the work, which is essentially a manual and not an inclusive system. This is of course the main problem before the writer of small text-books. Medicine and surgery are yearly extending their range; and selection thus becomes a matter for much care and discrimination, and a large degree of common sense. The price of the present edition has been raised from 10s. 6d. to 12s. 6d. net, and although this is for some reasons to be regretted, it cannot be denied that the many additions are worth the extra two shillings, and that the third edition of Waring's "Operative Surgery" is excellent value for the money. The ophthalmic and gynecological chapters remain for the most part the revised work of Mr. W. H. Jessop and Dr. Hubert Roberts, respectively, and will be found useful summaries of the common operative procedures in these special regions. Mr. Douglas Harmer and Mr. C. E. West have revised the chapter upon the throat and nose and upon the ear; while throughout the volume there are signs of careful revision, and the elimination of unnecessary and obsolete particulars. The new operations which have been introduced are well selected, and in various places we note that former descriptions have been made clearer and in some cases rewritten.

TRANSACTIONS OF THE TENTH ANNUAL MEETING OF THE AMERICAN PROCTOLOGICAL SOCIETY, 1908.

THESE transactions, at the conclusion of ten years' work, of a Society limited to the study of the anus, rectum, and pelvic colon do not readily lend themselves to connected criticism. To our mind the most valuable contribution to surgical science is the paper containing some new work on the innervation of the lower bowel. If the author's contention is verified that there are dilator as well as constrictor sympathetic nerve fibres to the internal sphincter, the fact may well have important bearings on the physiology of the rectal function. We do not find ourselves in accord with the views on the pathogenesis of simple stricture of the bowel, as expressed by several of the contributors, who seem to lay undue stress on syphilis as the causative factor; neither do we altogether agree with the treatment advocated for these conditions. The surgical measures recommended in some cases of stricture border on the heroic, and we have nothing but admiration to express for the surgeon who removes twenty-two inches of large bowel for this condition. Malignant disease is discussed by several of the proctologists, stress being laid on the necessity of early operation, and a complete series of all cases of melanotic sarcoma in the region is inserted. A few interesting rarities are recorded as short communications, and the last paper deals with anæsthetics, but this seems to be totally out of place in such a volume.

DISEASES OF NOSE, THROAT AND EAR.

MANUAL OF DISEASES OF THE EAR, INCLUDING THOSE OF THE NOSE AND THROAT IN RELATION TO THE EAR. By THOMAS BARR, M.D., and J. STODDART BARR, M.B., Ch.B. Fourth Edition. (Glasgow: James Maclehose and Sons. Pp. 477 + xxvii., with 3 coloured plates and 215 illustrations. Large 8vo. Price 14s. net.)

AMONG the numerous manuals on diseases of the ear which have recently appeared we welcome the fourth edition of Dr. Barr's well-known work. It is a large volume and the attempt which has been made to reduce its apparent size by printing considerable portions in small type, does not tend to make its perusal easier. The size is largely due to the arrangement of the work, which has resulted in considerable repetition. In the first four chapters the characters of ear diseases are treated as a whole under the headings "Methods of Examination," "Symptomatology," "Causes of Ear Disease," and "Methods of Treatment." Thus, the micro-organisms found in aural discharges are described in the chapter on symptoms and again in that on causation; mutism has a paragraph under "Symptomatology" and a chapter to itself at the end of the volume. So, also, the subject of syringing, with illustrations of the instruments employed, is discussed in the general chapter on treatment, and this is repeated—with the pictures—when describing the special treatment of suppuration.

With regard to the 35 pages on diseases of the nose and throat in relation to the ear, we cannot but feel that a work of this nature should either be a complete manual of diseases of the ear, nose and throat or else omit these latter altogether. Such a description cannot be thorough and complete, and the practitioner who desires to be fully equipped to deal with disease of these regions must of necessity have recourse to special works on the subject. The same remarks apply with greater force to the six pages devoted to general anaesthesia in operations on the ear, nose and throat. We must refer to one other point and deprecate the mention in a text-book of special and proprietary preparations of well-known drugs, especially coupled with the names of their manufacturers. In the description of local anaesthesia by cocaine and adrenalin it would appear unnecessary to mention a particular combination of these drugs under a coined title with the maker's name, and when discussing the injection of pilocarpine nitrate there is no need to name the preparation of a well-known firm. As a final grumble, the space seems to us to be rather unevenly allotted; in a work of this size three pages are a scanty allowance for the entire description of so common and important an affection as otosclerosis, and we could wish that more space had been devoted to diseases of the internal ear, which are dismissed in twenty pages, and that the reactions to the tuning-fork tests in the various forms of deafness had been dealt with somewhat more fully. We have commented at length on what appear to us to be defects in the book and which are, after all, chiefly matters of arrangement, but we do not wish to appear unappreciative of its many excellent and sterling good qualities. The opinions expressed are thoroughly sound, the work has been written with great care and shows evidence everywhere of much personal experience.

The after-treatment of operations is particularly well described in this volume, and this chapter should prove most useful to every surgeon and practitioner who has to deal with these cases; we have also nothing but praise for the very full and thorough manner in which the intracranial complications are discussed. The numerous illustrations

are for the most part excellent, though several are repeated in different parts of the book, and the 45 new pictures of various conditions of the drum have been beautifully reproduced by the four-colour process and are worthy of the highest praise. The index is unusually good, and there is also a bibliography.

TEXT-BOOK OF DISEASES OF THE NOSE, THROAT, AND EAR, FOR THE USE OF STUDENTS AND GENERAL PRACTITIONERS. By FRANCIS R. PACKARD, M.D. (Philadelphia and London: J. B. Lippincott Company. Pp. 369 + xiv., with 3 plates and 135 illustrations. Price 15s. net.)

THIS is a most disappointing book; we took it up with a feeling of pleasant anticipation, for it is well printed on good paper and the illustrations are for the most part excellently reproduced. But the work is very far from thorough; much space is occupied by irrelevant matter, and information concerning points of detail and difficulty on which the practitioner naturally looks for guidance in a work of this kind is conspicuous by its absence. To take a few instances: in the chapter of 15 pages devoted to diseases of the accessory sinuses of the nose, it is stated that the earliest subjective symptom of antral disease is pain—no attempt is made to separate acute and chronic inflammations of this cavity, and no mention whatever is made of latent sinus disease. The author describes a "radical operation" which consists in opening through the canine fossa and packing with gauze until the wound has healed by granulation; removal of the antro-nasal wall is not even discussed, and no allusion is given to advances in the treatment of this cavity which have been made in the last ten or fifteen years. Laryngeal tuberculosis receives just over three pages, with no reference whatever to the work done by Heryng, Krause and others on the local treatment of this affection, nor mention of any treatment for the dysphagia except the use of cocaine. Under "Tumours of the Larynx" there is no mention of the difficulties met with in dealing with multiple papillomata in children, and the only recommendation for treatment is to perform tracheotomy and leave the case alone. The most characteristic symptom of paralysis of the recurrent laryngeal nerve is said to be aphonia, but then the cord is said to lie midway between adduction and abduction, and the author is apparently unaware that abductor paralysis is the first result of pressure on the recurrent nerve.

Bilateral paralysis is said to be usually due to "a lesion in the central nervous system," but it is not stated in which nervous diseases the affection occurs; indeed, there is nowhere a complete or connected account of the causes or significance of the diseases described. Diseases of the ear are treated in the same casual manner; cerebral abscess is dismissed in nine lines, while diseases of the auricle receive nine pages; there is no illustration of the normal or retracted drum, but seven large pictures of malformations of the auricle, three of which are cases of adherent lobule. Indeed, the illustrations show a peculiar irrelevancy, as may be exemplified by the fact that of the three coloured plates two are photographs of an anatomical preparation of the cranial nerves, and the third shows a child with a vaccination sore on the nose and is accompanied by a picture of the vesicle on the arm from which the infection was derived! It will serve no useful purpose to prolong the unpleasant task of criticism when every chapter shows similar characteristics.

MISCELLANEOUS ITEMS.

THE MEDICAL ANNUAL, 1909. (Bristol: J. Wright and Co. Price 8s. 6d. net.)

THE twenty-seventh yearly issue of this well-known publication maintains the catholic and comprehensive character of its predecessors. The magnitude of this highly condensed account of the medical researches of the past year is a tribute to the industry, if to nothing more, of the medical profession, and also to the vigilance of the editorial staff. Difficult as it must be to keep within limits an annual whose natural tendency is to expansion, the present volume is no bulkier than its recent forerunners; this, however, has been achieved by using thinner paper, so that the actual reading matter is greater. Criticism in detail of the latter is impossible, but most of it is admirable; omissions are few indeed, but certain contributions might with advantage have been more liberally blue-pencilled. Various special features which have assisted the popularity of the "Medical Annual" in the past are once more noticeable. Especially to be commended is the large number of illustrations and coloured plates, which are well selected, excellently reproduced, and increase materially the value of the text. In the introductory chapter on therapeutic progress and elsewhere is still to be noted, though we are glad to think to a less extent than last year, a tendency to include unconfirmed claims made in German and American papers on behalf of various protected and proprietary products, some of which have been already discredited. The difficulty, no doubt, is to choose between undue scepticism, which means a delay of a year before a new remedy can be mentioned; and undue credulity, which involves the inclusion of much that is disproved before the "Annual" is printed. Considering how very few of these new drugs (or new names of old ones) attain any general recognition, the first alternative is much to be preferred. The editors have once more included somewhat lengthy essays on special subjects by distinguished foreigners. This year Professor Béranek outlines his views on the use of his tuberculin, and Professor Lucas-Championnière explains his teachings on the treatment of fractures. Interesting as these contributions are of themselves, it may perhaps be questioned whether this particular part of the scheme of policy is wise, considering the growing bulk of the rest of the volume. However, the publishers have probably realised by this time that they cannot please everybody; but if their "Annual" pleases the mass of the profession as much as it pleases us, we feel sure that its circulation must be extremely gratifying to them.

THE CAUSATION OF SEX. By E. RUMLEY DAWSON. Pp. 190. 21 illustrations; index. (H. K. Lewis. 6s. net.)

ENTHUSIASM is the first ingredient requisite for success in any scientific investigation, and Dr. Rumley Dawson is by no means deficient in this respect. Occasionally we find his remarks somewhat too reiterative, though we fully sympathise with a man who hopes to have made a great discovery. Even the great Lamarck was not above emphasising the importance and originality of his own work. Dr. Rumley Dawson has enunciated an interesting theory to account for the sex distinction in the genus homo. He maintains (1) that the male pronucleus has nothing whatever to do with sex causation; (2) that male children come from ova which dehisce from the right ovary, female from the ova of the left; (3) he is inclined to belief in polyspermy in man, as opposed to the ordinary view that one spermatozoon alone penetrates into the ovum. Generally, the facts well arranged and the theory is certainly presented as favourably as could be desired by its author. But when

he discusses the more controversial side of the question, the objections which he cites appear rather like wisps from a man of straw. The argument, for example, that because more boys are born than girls, and because the right ovary is larger than the left, therefore right ovaries produce boys, is quite unsound logically. Nor do we find anywhere the suggestion that the fact that the right ovary is larger is simply in accordance with the more general right-handedness of men and women. The book on the whole is suggestive and ingenious.

LIFE INSURANCE AND GENERAL PRACTICE. By E. M. BROCKBANK, M.D., F.R.C.P. Pp. xiv. + 288. (London: Henry Frowde, Hodder and Stoughton. 1908. Price 7s. 6d. net.)

DR. BROCKBANK'S manual fulfils admirably the purpose for which it has been written. There are few, if any, problems arising in the course of examinations for life insurance which he does not consider, and his discussion both of facts and their meanings is invariably concise, lucid, and practical. Hence, as a guide to those who undertake the responsible work of medical examiner, this book may be very heartily commended. The earlier sections are devoted mainly to the methods of examination. In them are to be found numerous suggestions and hints which show the experienced hand and brain, and which are of great practical value. In the later part of the work detailed attention is paid to the question of impaired but yet insurable lives, and the various problems which have to be met are duly considered. It is these problems which constitute the special difficulties of life-insurance work, and to meet these difficulties Dr. Brockbank's pages afford reliable and substantial help.

THE EDINBURGH STEREOSCOPIC ATLAS OF OBSTETRICS. Edited by G. F. BARBOUR SIMPSON, M.D., and EDWARD BURNET, M.A., M.B., with a Preface by Sir HALLIDAY CROOM, M.D. Section III. (London: The Caxton Publishing Co. In four sections, 84s. net complete.)

THE third section of this atlas of obstetrics maintains the high degree of excellence attained by the first two sections. Dealing with the anatomy of presentations and mechanisms of labour in the second and third stages, the photographs present in a lifelike manner the various phenomena of labour, which can be shown by pictures. The method of use of the axis traction forceps, the Walcher position, and some pictures of post-partum uteri complete the twenty-five subjects dealt with.

BOOKS RECEIVED.

JOHN WRIGHT AND SONS, LTD.

"Health, Morals and Longevity." By George Gresswell, M.A., L.R.C.P., and Albert Gresswell, M.A., M.D.
"Medical Annual," 1909.

ADLARD AND SON.

"Medical Reports of the Central London Throat and Ear Hospital."

H. K. LEWIS.

"The Causation of Sex." By E. Rumley Dawson, L.R.C.P., M.R.C.S.

WARD, LOCK, AND CO.

"Mrs. Beeton's Cookery Book."

J. W. ARROWSMITH, Bristol.

"Dromina." By John Ayscough.

JOHN BALE, SONS AND DANIELSSON, LTD.

"Notes and Thoughts from Practice." By W. J. Tyson, M.D., F.R.C.P., F.R.C.S.

"A History of the Reading Pathological Society." By J. B. Hurry, M.A., M.D.

"Tuberculin in Diagnosis and Treatment." By Dr. Bandelier and Dr. Roepke.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

GRADUATE STUDY IN AMERICA.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

In a former article we briefly outlined the work and development of the excellent graduate study hospitals and schools which are to be found at St. Petersburg and Moscow, and pointed out that to the latter institutions must belong the credit of having been the pioneers in a movement the importance of which is only gradually becoming realised in England. The Russian schools are, however, closely rivalled, in point of priority, by the large and, of its kind, certainly the best equipped post-graduate medical school and hospital, Second Avenue and Twentieth Street, New York. We have lately had the pleasure of going over this fine institution, and an account of its history, progress, and work is an inevitable introduction to a consideration of the advance of the "graduate study ideal" in America.

Unlike the Moscow and St. Petersburg institutions, the New York school started in a small way, entirely unassisted by State grants or the support of great notabilities. It made up for these deficiencies by possessing from its inception the invaluable services of that keen enthusiast, Dr. Roosa, whose name easily heads the list of those who have taken up the cause of the graduate student. It was he who coined the compound "Post-Graduate," which, notwithstanding its suspicion of tautology, has succeeded in gaining a measure of respectful recognition; it was he who in 1882 founded the New York School and Hospital, and for more than twenty-four years continued its staunch supporter and friend. As early as 1875, a year after the Russian project was mooted, but two years before the St. Petersburg school was actually started, the Council of the University of the City of New York created a post-graduate faculty in its medical school; but this beginning was inauspicious. The classes could not be considered proper graduate classes, as they were attended by undergraduates as well as by matriculates.* Dr. Roosa, who justly appreciated the desirability of strictly limiting such classes to graduates, set himself strenuously to supply the want that existed. With the help of some of his colleagues who shared his views, and who, like him, had resigned from the University Faculty to be free to devote themselves whole-heartedly to the development of the graduate study ideal, he commenced work in the Chickering Hall on Fifth Avenue. His classes and clinics proved so popular that it was soon found necessary to organise the school on a definite basis, and after a time the present hospital and school were started. The inception of the school and hospital was the work of private enterprise; both have been supported during the quarter of a century which has elapsed since their foundation by private donations, the unselfishness of the staff of professional workers, and the charity of lay friends. Last year the school lost the help and support of its able founder; but before his death Dr. Roosa was able to see the realisation of a part, at least, of his ideal in the solid success and admirable progress of the hospital.

THE PRESENT INSTITUTION.

The institution on Second Avenue and Twentieth Street is a large, seven-storied block, plain but impressive in its

solidity. In this building, under one roof, are housed both the school and the hospital—an excellent arrangement which has everything to recommend it. On the ground floor are the school quarters; the administrative offices; a large, airy, and well stocked reading-room; a medium sized demonstration theatre; and side rooms. On the upper floors are located the larger theatres, including a very large and excellently lighted operating theatre, the eye and ear operating room, a fine laboratory for chemico-pathological purposes, with attached pathological museum, and, lastly, but by no manner of means least, the hospital wards. These are well worth inspection, not only because of the admirable way in which they are arranged, from the point of view of pure hospital construction only, but equally so because they represent an ideal in graduate hospital combinations, showing every possible



THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

department adequately provided for. In a general hospital this multiplicity of departments may be open to grave objection; in a graduate teaching institution such as this it is to be whole-heartedly praised, since it affords students every opportunity of becoming familiar with special work without being obliged to leave the precincts of the building. The orthopaedic and children's wards are specially interesting, as they are new, and models of what such wards should be. Efficiently lighted, ventilated, and heated, they are in every way suitable for their intended purpose, and the economy of space, which is nowhere allowed to interfere with efficiency or with a proper regard for sound hygienic principles, that obtains in these wards is reminiscent of the Moabite Hospital at Berlin at its best. To some extent the hospital, as a building, must be regarded as not being new. Yet it is by no means old, and the few anomalies that, from the modern hospital designer's point of view, may be noticed are small and easily to be amended when the school decides to rebuild. The rebuilding scheme is under consideration, and active operations will be started as soon as the munificent legacy from the estate of the late

* The term "matriculate" as used in America is synonymous with our term "graduate," or "diplomate," meaning one who has actually got his degree or diploma.—ED. THE HOSPITAL.

Mr. Hewitt, who bequeathed £400,000 (\$2,000,000) to the institution, is available. At present the hospital expenditure is met by private subscription and by the fees derived from the school courses, which are generously presented to the main hospital fund by the professors and demonstrators. Some assistance is given by the City of New York, in the form of a small hospital grant, which is likely to be increased in the near future, when the institution takes a larger share in what may be called municipal hospital work than it is at present doing. American hospitals, especially in New York, are just now suffering from the depression consequent on the recent financial panic. The cost of supplies has increased, and the daily expenditure has risen in proportion. The Post-Graduate Hospital has also had to suffer, but it has pulled up manfully, and there is every reason to believe that, with the munificent Hewitt bequest to aid it, the extensive plan of development which the directors have in contemplation will be possible in the course of the present year.

During the past year the hospital treated, as in- and out-patients, a total of nearly 30,000 persons, of whom more than 75 per cent. were free patients. It is worth while to note that the institution makes a point of carefully investigating the claims of non-paying patients, by means of a system of inspection which has points in common with

that in force at the Royal Free Hospital. No one is allowed to attend as a dispensary patient, or to occupy a "free" bed, who is able to pay even a nominal fee to an outside practitioner. Patients are received into the private rooms as paying patients and are charged according to their ability to pay. Taking the corporation statement for the past year, we find that the total expenditure was \$236,078, while the total receipts fell short of that sum by \$58,074.

A word must be said about the school for nurses, which is part of the hospital, though located in a separate block, fronting the Twentieth Street entrance to the main block. This is an excellently equipped building, with separate bedrooms, reception rooms, and a roof garden. The course of instruction is a thoroughly practical one, and the hospital offers exceptional advantages for the education and training of nurses. It is satisfactory to find that the post-graduate nurses are in great demand in the city and elsewhere, both for private and for institutional duty.

The hospital and school are managed by an influential corporation and by a faculty which is thoroughly representative. At the head of the executive is Dr. George N. Miller, while Dr. Arthur Chace acts as secretary. The superintendent of the hospital is Dr. Brush, to whose courtesy we are indebted for the opportunity of investigating the work and progress of the institution.

(To be continued.)

PROPRIETARY PREPARATIONS FALSELY DESCRIBED.

THE practice which has become so common among manufacturing druggists of attaching to some drug, more or less well known, a name which is registered as a trade-mark, has produced a great deal of confusion in the minds of the medical profession, amongst whose members many such products are "pushed" by enterprising travellers at exorbitant prices. It is well known now that aceto-salicylic acid, for example, is marketed by different firms under ten or a dozen different names, of which the two best known are perhaps aspirin and xaxa; and that the cost of this useful product, if ordered under its proper name, is about an eighth of that of its rival pseudonymous forms. Now this state of affairs is serious enough, but it is very largely the fault of medical men themselves that it has become so prevalent. If doctors will not take the trouble to sift the plausible tales of druggists' travellers, who are naturally intent on effecting a sale, a premium is put upon this form of covert mendacity. Hexamethylen-tetramin is another drug which has suffered severely in this way; its best-known alias is urotropin, and this again is simply the proprietary name under which the salt is sold by one particular firm.

All this, if not common knowledge, is at any rate understood by a large number of medical men. But a new and much worse form of this system has been brought to light, and one which involves positive misrepresentation of the most unprincipled kind. The method seems to be so far the monopoly of foreign—mainly German—firms who flood the profession in this country with pamphlets of apparently unimpeachable authority, and of most circumstantial evidence as to the value of their latest new preparations. Two papers on the matter in question from the *Therapeutische Monatshilfe*, and the *Deutsche Medizinische Wochenschrift* are summarised in the *Medical Review*, from which we take many of the following particulars.

The feature common to most of the frauds, for they are nothing less, is the description of a mechanical mixture of two or more drugs as a new compound, whose alleged chemical formula and extremely lengthy constitutional name are disclosed. A short and catchy title, usually suggesting either the pretended action of the mixture, or some impor-

tant constituent of it, is then given, under which protected name the article is sold to the profession and the public. Moreover many of the claims made on behalf of these drugs are false and unfounded to a degree, as is shown by examples which Professor Thoms and Dr. Harnack have published. Unfortunately there seems to be a considerable section of medical men in Germany who are willing to attach their names to testimonials, and enthusiastic clinical reports on the merits of these impostures, and in consequence the medical literature with which the advertisements bristle appears to confirm the statements of the manufacturers.

To take a few examples: arhovin, which has been most extensively advertised in Britain, has been described by the makers as diphenylamine thymyl benzoate. It has been shown, however, that no such acid as thymyl-benzoic exists; and that arhovin, which has been extolled as a urinary antiseptic, is a mechanical mixture of thymol, diphenylamine, and ethyl-ester of benzoic acid. By the same (German) firm two drugs known as jodofan and pyrenol have been extensively advertised. The former is said to act by giving off iodine-formol; the chemical formula allotted to it is an impossible one, it does not give off formaldehyde, and it contains about a tenth of the quantity of iodine disclosed by the formula assigned to it. The latter is an antipyretic, to which two most imposing names and formulæ have at different times been allotted; actually it is a mixture of salicylate and benzoate of soda with minute proportions of benzoic acid and thymol. Again, formureol has been introduced as a remedy for gout, and has been described as hexamethylen-tetramin sodio-citrate. As a matter of analysis it is a mechanical mixture of hexamethylen-tetramin (a product which burlesques under many protected names, of which urotropin is only one), with neutral and acid sodium nitrates. Phagocytin is sold in sealed vessels holding 1 c.c. each, and alleged to contain .05 gr. of pure nucleate of sodium, a contention completely upset by analysis.

There are many other foreign synthetic drugs, the claims made on behalf of which are equally fraudulent, but which we have not space here to deal with. The moral of these disclosures is surely obvious, though medical men in this

country seem unaccountably slow in taking it to heart; even in some of the London teaching hospitals the visiting staff still order drugs of this sort under their proprietary names, and while that is so it is difficult to blame the students for acquiring the habit also. The commercial enterprise of German drug firms, together with the complacency of British medical men, has done a great deal of harm already, both to the public and to the profession. Self-drugging is directly encouraged whenever a doctor orders for a patient any patent proprietary drug, whether in compressed, fluid, pill, cachet, or any other form. Even when the prescriber is quite sure that he knows what it is he thus orders, the act is foolish; when his only source of information is the circular of a none too scrupulous firm of foreign druggists, it is positively immoral.

A healthy scepticism as to the merits of new synthetic drugs is not merely warranted by the experience of the past; it is the only proper scientific method by which that which is true may be distinguished from that which is false. The medical profession as a whole has been much too lax in accepting the fairy tales of the vendors of proprietary synthetic drugs, whether of British, Continental, or American origin. The goods thus sold are always very much more expensive under their trade aliases than they would be if ordered by their proper names; and, as has been shown, they are often barefaced frauds upon the consumer and the prescriber. Those who have got into the fatally easy habits of ordering synthetic products on the strength of the claims made for them by manufacturers would do well to read the two German papers from which we have quoted.

NEWS AND COMING EVENTS.

THE Festival Dinner of the City of London Lying-in Hospital will be held at the Trocadero Restaurant on Thursday, April 29, at 7 for 7.30 P.M., when the Hon. Rupert Guinness, C.M.G., M.P., will be in the chair.

THE Festival Dinner of the Royal Hospital for Incurables, Putney Heath, will be held on Wednesday, May 5, at the Savoy Hotel, Strand, when the Lord Mayor will be in the chair. The dinner will be at 6.30 for 7 P.M. precisely.

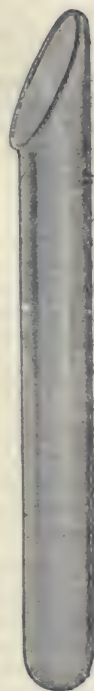
A FESTIVAL DINNER in aid of the East London Hospital for Children, Shadwell, E., will be held at the Ritz Hotel on Wednesday, April 28, at 7.30 P.M., when the chair will be taken by Field Marshal Lord Grenfell, P.C., G.C.B., G.C., M.G.

LORD GEORGE HAMILTON, speaking on April 5 at the annual meeting of the Victoria Hospital, Deal, of which he is president, said the Poor Law Commission looked very closely into the question of medical relief for the wage-earning classes. Putting aside as impracticable a scheme of universal gratuitous medical relief, which would probably cost thirteen millions a year and possessed other disadvantages, and rejecting the German system of compulsory insurance, they came to the conclusion that there should be a general system of medical relief on a provident basis, and that those who had made provision against illness should in the event of their requiring hospital treatment be entitled to gratuitous relief on production of a medical certificate. They were in favour of trusting to persuasion and inducement to utilise as far as possible the existing provident dispensaries all over the country as a basis on which they could if necessary extend the system of medical relief.

NEW APPLIANCES & THINGS MEDICAL.

THE IMPROVED TEST TUBE.

WE have received from Messrs. Baird and Tatlock, scientific instrument makers and laboratory furnishers, of 45 Renfrew Street, Glasgow, a new form of test tube devised by Dr. Wyllie Nicol, of the Glasgow Hospital for Skin Diseases. It is suitable for all tests, and is specially convenient for those in which it is necessary to add fluids gently and gradually, as in the nitric acid test for albumen. The large oblique mouth allows of the tube being held at any angle. Reagent bottles, even when not very suitable in shape, can be quickly adjusted to it. Pouring and dropping in are easily controlled, and drop bottles can be used with the tube at any angle. With the rim at the upper end turned in there is little risk of soiling. The tube can be readily closed with the thumb, for which the size and shape of the opening are well suited. It can be cleaned as easily as the ordinary type of test tube. The size and shape of the mouth and rim may be varied to suit special requirements; but the form shown in the illustration is the most useful. The tube may be had in all sizes. This simple improvement of the ordinary test tube is distinctly ingenious, and we can recommend it.



THE annual general meeting of Governors of the Royal Eye Hospital, St. George's Circus, Southwark, S.E., will be held at the hospital on Wednesday, April 28, at 4 P.M.

THE annual report of St. Thomas's Hospital shows that last year 561 beds were available for use, and the average number occupied daily was 498. The number of in-patients was 6,972 and the average length of their stay was 26 days. The total cost of each in-patient was £7 11s. 6d. New out-patients numbered 82,569, with 226,239 attendances. Seventy-eight inquests were held during the year. In the x-ray department 3,477 cases were treated and 5,086 skiagrams were taken. It is proposed to open two of the three empty wards with as little delay as possible—one for female medical cases and the other as a maternity ward for special cases. The ordinary expenditure last year was £64,278. Legacies produced £17,341, and the total income was £76,126.

THE Post-graduate College of Medicine and Surgery attached to the West London hospital has had a satisfactory year of work, according to the annual report of the hospital. Two hundred and thirty-two fresh names have been enrolled on its books, and many old members have returned for a further period of study. The total number of medical men who have attended the college now amounts to 1,654, and includes 67 life members. Amongst those attending last year were 24 officers in the Naval Medical Service, 26 in the Royal Army Medical Corps and Indian Medical Service, and 48 practitioners from the Colonies and abroad. The West London Medico-Chirurgical Society, which holds its meetings in the rooms of the Post-Graduate College, is also in a flourishing condition. At the date of the last report it had upon its books 641 members.

THE Lord Mayor will preside at a festival dinner in aid of the funds of the City of London Hospital for Diseases of the Chest, Victoria Park, to be held at the Trocadero Restaurant on May 6, at 7.30 P.M.

A GOVERNMENT grant of £200 has recently been made to Mr. Harry W. Cox, a manufacturer of x-ray apparatus and other scientific instruments, on account of his sufferings through the use, partly of an experimental nature, of Röntgen-ray apparatus.

A SERIOUS epidemic of typhoid fever has for some time been raging at Cherbourg. The troops in particular have suffered severely from the disease, and 190 cases are still under treatment in the military hospital. The outbreak is stated by the *Times* Paris correspondent to be due to the unsatisfactory character of the water supply and to the primitive sanitary arrangements.

ACCORDING to an official return the total number of deaths from industrial accidents reported in 1908 was 4,224, a decrease of 253 on 1907, but an increase of 29 on the mean of the five years 1904-1908. A decrease is recorded in every group of occupations except mining and quarrying.

PRINCESS ALEXANDER OF TECK opened on April 20 the first block of the new buildings of the Royal National Orthopaedic Hospital in Great Portland Street, comprising the out-patient department and nurses' home, and including a new orthopaedic gymnasium, as well as massage and electrical departments. The new buildings have cost some £75,000, of which £25,000 is still to be raised. The hospital itself is to be opened during the summer.

SIR WILLIAM CLERKE presided at the annual meeting of the Hospital for Women, Soho Square. During 1908 the number of in-patients treated was 946, which is greater than in any previous year. There were 3,810 out-patients, with a total of 14,715 attendances. The committee of management appeal for increased financial support for maintenance and also towards the reduction of a mortgage debt of £7,000. The work of rebuilding the hospital has been commenced, and by the end of the present year it is hoped that a practically new hospital will be ready for the reception of patients. The entire scheme will cost £18,500, and towards this sum the committee had in hand or promised £10,500, and an additional £3,000 had been promised by King Edward's Hospital Fund for London, on condition that the balance required to complete the work—namely £5,000—was raised by next October.

OBITUARY.

DR. CHARLES BELL TAYLOR, the eminent ophthalmic surgeon, died at Nottingham, on April 14 after a very short illness at the age of 80. Dr. Taylor received his medical education at the University of Edinburgh and in Paris. He obtained the M.R.C.S.Eng. in 1852, and, after acting as medical superintendent of the Walton Lodge Lunatic Asylum at Liverpool, he took the M.D. degree at Edinburgh in 1854, and shortly afterwards settled in Nottingham to practise. In 1859 a vacancy for a surgeon to the new Eye Infirmary at Nottingham turned his attention towards ophthalmic surgery, in which branch of the profession he showed increasing skill as years went by. His reputation as a successful operator on the eye soon travelled far beyond the neighbourhood, and his opinion was valued by a very wide circle of practitioners. In spite of his advanced age, he continued to see patients, and quite lately advised the operation for cataract upon "General" Booth,

which has since been successfully performed. His most important published work was "Clinical Lectures on Diseases of the Eye."

MR. SIMEON SNELL, F.R.C.S., of Sheffield, President of the British Medical Association, and one of the leading ophthalmic surgeons of the North of England, died on Saturday, April 17, at his residence, Moor Lodge, Sheffield. He received his professional training at Guy's Hospital and Moorfields Ophthalmic Hospital. He obtained the M.R.C.S.Eng. in 1872, L.R.C.P. in 1873, and F.R.C.S. Edin. in 1892, while last year on the occasion of the visit of the British Medical Association he received from the Sheffield University the honorary degree of doctor of medicine, and for many years was ophthalmic surgeon to the Sheffield Royal Infirmary and Blind Institution. He was Professor of Ophthalmology at the Sheffield University and was a member of the University Council. He had been President of the Ophthalmological Society of the United Kingdom and President and Secretary of the local Medico-Chirurgical Society. Last year he received the Middlemore prize of the British Medical Association for his contributions to the science of ophthalmology. For many years he was Hon. Secretary of the Sheffield Literary and Philosophical Society, and at one time he edited the *Medical Quarterly Journal*.

AFTER a short illness, Mr. Thomas William Nunn, F.R.C.S., consulting surgeon to the Middlesex Hospital, died this week at the age of 84, at his country residence near Royston. Before being appointed to the surgical staff of Middlesex Hospital Mr. Nunn was surgeon to the Westminster Western Dispensary, and to the Central London Throat Hospital, and the London Hospital for Skin Diseases. He was formerly a lieutenant in the 3rd Middlesex Militia and honorary surgeon-major in the Volunteers. His chief contributions to medical literature dealt with the treatment of cancer, and in 1899 he published in book form the reports of 1,000 cases from the registers of Middlesex Hospital. Mr. Nunn was a past vice-president of the Pathological Society and a medical associate, and member of the teaching staff of the anatomical department of King's College. He obtained the membership of the Royal College of Surgeons of England in 1846, and the Fellowship in 1857.

DR. THOMAS CRAWFORD HAYES, the well-known gynaecologist, died on Monday at Clarges Street, Mayfair. Dr. Hayes was formerly a senior moderator and gold medallist at Trinity College, Dublin. In 1872 he obtained the membership of the Royal College of Physicians of London, and in 1875 obtained the M.D. Dublin, whilst in 1889 he became a Fellow of the Royal College of Physicians. Dr. Hayes was emeritus professor of obstetric medicine at King's College and consulting physician for diseases of women to King's College and Royal Free Hospitals. He had also held appointments at the Evelina Hospital for Sick Children and the General Lying-in Hospital, and was formerly a member of the English Conjoint Examining Board.

THE death is announced, in his eighty-third year, of Mr. Claudius Galen Wheelhouse, F.R.C.S., LL.D., D.Sc. Mr. Wheelhouse was in succession Professor of General Anatomy, Physiology, and Surgery. The high position of the Leeds School of Medicine was to a large extent due to the ability and enthusiasm of Mr. Wheelhouse. On two occasions he held the position of President of the School. In 1864 he was elected Surgeon to the Leeds Infirmary and continued to hold this post for twenty years. In 1885 he was elected direct representative of the profession on the General Medical Council, a position which he held for ten years.

SOCIAL AND POOR-LAW PROBLEMS.

THE EDUCATION OF POOR-LAW CHILDREN.

THE report of the educational work done in Poor-law schools by Mr. Tillard and Miss Synge, which was recently published, draws attention to many points which are not fully realised even by Boards of Guardians, and certainly not known to the general public. In those circumstances the State Children's Association has sent out a letter which brings forward some facts which are well worth attention.

So far as the buildings and the staff go, Poor-law schools compare favourably with many others. The premises are for the most part spacious and airy, and the proportion of certificated teachers employed is as large as that of well-staffed elementary schools. As the classes in the Poor-law schools are smaller than in ordinary schools, the pupils have the advantage of greater individual attention on the part of the teachers. Yet the children in Poor-law schools are, in the opinion of the inspectors of the Board of Education, about a year behind those in ordinary schools in point of attainments. This might—and in some cases must—be set down to a poor heredity and a bad early environment; but these disadvantages are by no means universal. Many children of the State come under the Poor-law only through the death of their fathers. Until their orphanhood they had the same conditions of life as other children of their class, and after they go to the Poor-law school the advantage is with them so far as physical conditions go. They are better fed, better clothed, and better lodged than the majority of their former companions. Moreover it is found that Poor-law children who attend public elementary schools do exceedingly well. Why do they not do equally well in the Poor-law schools?

The answer may be given in two words—monotony and isolation, which injuriously affect both teachers and pupils. The average child of the humbler classes has his school hours, but also his home life, with all its varied interests, its amusements, even its anxieties. The teachers in elementary schools can, when their daily work is over, choose their own environment. The children of the richer classes are often sent to boarding-schools, but they have long holidays, when other influences than those of the school and its discipline affect them. But Poor-law children spend years in the school, with only rare changes of environment, or, it may be none. And everything around them tends to diminish any individuality or initiative which they may possess. Where numbers are large discipline needs must be strict, and the discipline lasts for 24 hours of the day. Even play is too thoroughly "organised."

"Organised games," say the Inspectors, "are gaining favour, and in some schools the right spirit prevails, but in the hands of some of the teachers they were dreary indeed. The children went through them as joylessly as if they were lessons; they did not understand what they were doing, and instead of bringing out the natural merri- ment of healthy children, the games seemed to sadden and destroy spontaneous play."

The inspectors think that Poor-law girls in particular need physical training, and that they do not get it.

"Their lives are full of dull routine and monotony. Scrubbing, which occupies much of their time, is no substitute for physical training, and is certainly not exhilarating. A great deal of their time is spent sitting over needle-work out of school hours, and they have less free time and recreation than the boys."

And unfortunately even as an industrial training this

scrubbing is not successful. Again, the Inspectors say: "For the most part we found that while all the girls did a certain amount of washing and ironing, their work was incomplete; that is to say, they would iron collars they had not learned to starch and wash articles they never learned to iron, exactly in the same way in which they peeled potatoes that they could not cook. They assisted as 'hands' in the work of a large laundry; but for that very reason they failed to acquire any practical knowledge of the complete art of washing clothes. In the large institutions the cooking is done wholesale, but such work in such kitchens is no training for the girls for situations in small households or for their own homes when they get married."

And we may add to the inspectors' remarks that by way of keeping them unfit for the all-round work of the wife and mother in a humble home many Guardians refuse to send the girls to situations where only one servant is kept. That is, they are prevented from learning their future work in those small middle-class households where perhaps the best training in all-round housekeeping and economy is to be found.

The Inspectors suggest that, in view of the inevitable limitations of life in a Poor-law school, the training should be made more practical. The children "lack ordinary knowledge of the world and the transactions of everyday life, they do not handle money, and do not get to know the prices of articles in common use." The misfortune of this is obvious, but it is not clear how it can be remedied under the conditions of institutional life. We believe that Guardians, officials, and teachers do their best for the children under their care, and there is a general and sincere desire to give the children a really good education and a proper preparation for life. But the defects which the inspectors deplore seem to be inseparable from large institutions. The question then arises: Are these institutions necessary? The State Children's Association is opposed to them, and we think with reason. In a great number of cases these children are the offspring of widows who cannot unaided maintain them, but with some help—the outdoor relief which is so freely granted to many who are undeserving—could keep their homes together and bring their children up on wholesome, homely, practical lines, while the means of education are everywhere within reach of all. If the children are wholly orphaned, but come of a respectable family, it should not be impossible to find a respectable home for them with people of their own class.

ONE of the special features of the Missionary Exhibition, entitled "Africa and the East," which will be held at the Royal Agricultural Hall from June 8 to July 3, under the auspices of the Church Missionary Society, will be a special exhibit of outfit suitable for missionaries and travellers shown in a special outfit section. This section is being arranged under the auspices of Livingstone College, which is specially devoted to the study of all questions affecting the health of missionaries. It is hoped on the present occasion to demonstrate the most up-to-date methods of modern outfitting for travellers in the tropics. One of the special features of this section will be an exhibition of the various methods of protection from mosquitoes and other insects. The organiser of this section, Dr. C. F. Harford, Principal of Livingstone College, will be pleased to communicate with any who desire particulars if they will write to him at Livingstone College, Leyton, E.

EDITOR'S LETTER-BOX.

"A CRITICISM OF HOMŒOPATHY."

To the Editor of THE HOSPITAL.

SIR,—Homœopaths, remembering past days, should perhaps be grateful to you that your article under this heading is written "more in sorrow than in anger"; but had you studied the subject more profoundly you would have avoided one or two errors. You deny that vaccine therapy is "of the essence" of homœopathy. Well, vaccine therapy consists in treating diseases with substances derived from the very bacilli that cause these diseases, and if that is not treating "likes with likes" then language has no meaning. You are in a position similar to those who maintain that municipal ownership of gas or trams or water is not as the essence of Socialism. It is not the *whole* of Socialism; it may be held desirable by men who do not accept the whole doctrine of Socialism; but it is Socialism as far as it goes, and rightly so called by those who care to call things by their names.

In the endeavour to escape from the position you (no doubt in ignorance) misrepresent the attitude of the homœopathist towards "symptoms." Let me endeavour to make it clear. The aim of the homœopathist is the aim cherished and recommended by all good clinical teachers—to treat the individual patient. He holds that the symptoms and physical signs of any given case are the result of an agent or agents acting on an individual constitution, of a certain seed, as it were, growing on a certain soil, and that to neglect either seed or soil is to fail in the best way of dealing with a condition which is the result of both. From the *whole*—the totality—of the symptoms and signs he shapes to himself the picture of his case. Now, drugs in their turn produce symptom-complexes comparable to the symptom-complexes of disease. The contention of the homœopathist is that the drug which has produced a symptom-complex most resembling the picture of his given case is the desirable remedy for that case, and the search for the application of that remedy is the practice of homœopathy. Therefore the homœopathist applauds the vaccine therapist who distinguishes one kind of cystitis from another. That is individualisation, and is the only road to successful treatment. He knows, indeed, that the vaccine therapist has already found that he must go further and recognise that (say) a staphylococcus vaccine derived from cocci of case A will not necessarily cure a staphylococcal disease in case B, so individual are our cases. Similarly, the homœopathist looks for indications for a remedy for his particular case, not for a remedy for the disease in general. Now the accuracy of this contention of the homœopathist is held by him to depend on the results of his daily experiences with remedies. It is, in fact, a matter for experiment and experience. Any man who will be at pains to master a little drug symptomatology can test the principle of homœopathy for himself, and homœopaths justly refuse to regard as scientific the procedure of denying their conclusions without testing their evidence. For instance, we all know that cantharides can produce an acute nephritis. Now recently a French doctor (not a homœopathist) has announced that drop doses of tincture of cantharides are very beneficial to

cases of acute nephritis. (N.B.—The discovery has been made more than once before.) Now any man can try this for himself. If his experience is successful he will have proved, in one instance at least, that the like can benefit the like, and may be induced to extend his researches; if, on the other hand, he fails to establish a curative relation between drug and disease, his results, carefully recorded, will be a practical contribution towards a problem which can be settled by prolonged and painstaking experiment better than by *a priori* argument.

Yours faithfully, C. E. WHEELER.

5 Devonshire Street, Portland Place, W., April 16.

ANSWERS TO CORRESPONDENTS.

NEMOS.—In reply to your question, Sir Aston Webb remodelled the Stafford Hospital and designed a hospital at Burton. We do not know of any other hospital work with which he has been concerned.

HOSPITAL SATURDAY FUND.

Sir Savile Crossley presided on Saturday last, April 17, at the annual meeting of the supporters of the Hospital Saturday Fund, at the Mansion House. The income last year was £29,830—£2,690 more than in the previous year. The amount collected by the local committees exceed £4,000, as compared with £3,529 in 1907. £27,332 was distributed among 209 institutions. About 6,000 penny-a-week sheets were issued quarter by quarter, and 4,500 annual sheets were distributed in June. The Surgical Appliance Committee supplied 5,318 appliances during the year at a cost of £2,387, towards which the recipients or their friends contributed £1,252. The Hon. Mrs. John Coke, the daughter of their treasurer (the Hon. Harry Lawson), distributed the medallions of the St. John Ambulance Association. In 1896 the total invested capital of the Central Funds was nil, but now in 1909 the three great funds have an invested capital worth well over one and a half million. In 1896 the amount distributed by the Central Funds was £60,000, while last year it had risen to £238,000. The starting of the King's Fund so far from damaging the hospitals had very materially benefited them. Canon J. W. Horsley moved the adoption of the report, and the motion was seconded by the Mayor of Finsbury, supported by the Mayor of Woolwich, and adopted unanimously.

Dr. Acland pointed out that one-sixth of the fund was devoted to the crusade against tuberculosis, which was the cause of the death of 100,000 people a year in England alone. Tuberculosis was far more prevalent than it was supposed to be, and he advocated the notification of the disease and its more general treatment.

The rate of annual subscriptions to THE HOSPITAL, either direct from the Office or through agents, is:—

For the United Kingdom ...	15s. a year
To the Colonies and Abroad ...	17s. a year

inclusive of postage in each case.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For GOUT and RHEUMATISM.

Professor Immermann, Basle, Professor of Internal Medicine at the University:—

"Hunyadi János has invariably shown itself an effectual and reliable Aperient, which I recommend to the exclusion of all others. Never gives rise to undesirable symptoms even if used continuously for years."

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

The Hospital

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SATURDAY, MAY 1, 1909.

THE DIETETIC VALUE OF BEER AND STOUT.

THE report of the Special Commission on Beer which we published last week has caused much interest in medical circles and outside them. It is the result of many months of close investigation and impartial inquiry. For many years, to an increasing extent, beer has been subject to an unjust prejudice due to an impression that its consumption is harmful rather than beneficial to many people. It is time that beer should be justified in public estimation by proving, as our Commission does, its great nutritive value, apart altogether from its alcohol content. The fact is that good, properly made beer is a beverage containing a very small amount of alcohol and a relatively large amount of nutritive material. It is time that the erroneous view that beer has no nutritive value in itself, and merely consists of a beverage upon which a certain portion of the community intoxicates itself, should be exposed and discredited. The results of our Commission show that beer is *par excellence* the nutritive alcoholic beverage. All beverages because they contain alcohol should not be regarded in the same light. The spirit nipper is committing quite a different act from the beer drinker; in fact, beer is much further removed, from the point of view of its alcohol content, from some wines and all spirits than it is from ginger-beer.

When a man drinks good beer he drinks and eats at the same time, just as when he eats a bowl of soup. The terms "eat" and "drink" are curiously but inconsistently used as connoting the difference between what is merely quenching our thirst and what is actually consuming nourishment. Our Commissioners point out a man might more properly be said to eat beer than to eat certain kinds of soup, or indeed water-melon. Their report will enable members of the medical profession and the public to understand clearly what constitutes good beer, and where and how they may obtain it. Beer drinkers, the numbers of whom we hope will increase considerably as the result of the researches of our Commissioners, are now in a position to protect themselves

from bad beers, and we hold the view that it would be infinitely better for the well-being of the people of these islands as a whole if they were to select beer or stout as their habitual drink, rather than wines or spirits.

The former contain all the elements of a typical diet, with the exception of fat, and in a proportion approximately physiological. Our Commissioners remind us that if the worth of a food is measured by its calorimetric value the fact is that a glass of good ale is approximately as nourishing as a glass of milk, and that a quart of good beer is nearly equivalent to a quarter of a pound of beef.

The fashion in regard to beers and stout is changing and there has been a very considerable growth in the consumption of the latter in the last few years, owing to its increasing use for nutritive purposes in cases of influenza and other ailments where the system requires building up. Beer and stout are of course not suitable foods for the obese, or for the subjects of renal disorders or glycosuria or diabetes; but where there is no counter-indication the habitual use of beer or stout in moderate quantities is better calculated to benefit residents in these islands than the habitual use of either wines or spirits. Another important medicinal aspect of beer and stout, and especially of the latter, is their hypnotic action. Stout is one of the most harmless and best hypnotics we possess, and is often far more efficacious in the treatment of insomnia than drugs. Part of their action is due, our Commissioners remind us, to the hypnotic principle contained in hops, and the more heavily these beverages are hopped the more marked is their hypnotic action. An average dose for the purpose is half a pint, and this should be taken the last thing at night, as long after an early dinner or supper as possible. Another point in favour of beer and stout as beverages is that the likelihood of their containing pathogenic organisms is too extremely remote. This gives them, like tea and coffee, a great advantage over milk, for they are all prepared under conditions which render pollution by infective bacteria extremely improbable.

These remarks must not be misconstrued. We

are quite alive, as our Commissioners are, to the tremendous harm done by the abuse of alcohol and the good done by sympathising with temperance. At the same time, with the philanthropist's desire to improve mankind, we have the scientist's regard for fact. Upon untruth no enduring fabric, however philanthropic its motive, can ever be securely built. The fact is that good, properly made beer is a beverage containing a very small amount of alcohol and a relatively large amount of nutritive material. It is

too often forgotten that beverages like ginger-beer and koumiss contain slightly more than 1 per cent. of alcohol, whilst there are beers on the market containing only 2 or 3 per cent. of this drug. Our Commissioners give some interesting comparisons between beer, tea, and beef-tea. Those comparisons indicate that beer compares favourably with both these products, and our Commissioners properly insist that it would be difficult to find a meal at once simpler and more nutritive than a crust of bread and cheese, or bread and butter, or both, and beer.

DENTISTS AND ANÆSTHESIA.

As had been foreseen by those who have studied the Bill to regulate the administration of anæsthetics, which was read a first time in the House of Commons on March 25, the clauses by which it is proposed to deprive dentists, as well as other unqualified persons, of the privilege of administering all general anæsthetics are exciting the active opposition of the dental profession. In a circular letter to the members of the British Dental Association the Secretary of that body, on behalf of the executive, brings forward several arguments against the Bill as it at present stands. We have already (*THE HOSPITAL*, March 20, 1909, p. 629) discussed by anticipation most of the provisions to which dentists object, and have pointed out that there is a good deal to be said on both sides of the question; we trust, therefore, that dental surgeons will not regard it in any way as a sign of hostility to some of their contentions if we mention one or two weak points in others. Their Association asserts that the average dentist has more experience and skill in the use of anæsthetics for dental purposes than the average medical man. This may possibly be true so far as nitrous oxide is concerned; but it certainly does not apply to the new generation of medical men who have received adequate instruction in this branch of practice, and in a few years' time it will probably no longer hold good. More than that, the dental profession must allow that the more skilful and successful a dentist is, the more he insists on employing none other than a qualified medical anæsthetist. The meaning of this very significant fact is that the best class of dentists do not consider themselves on an average as competent to administer general anæsthetics as the average medical practitioner of a corresponding status. And if that is what the conduct of the best class of dentists means, it stands to reason that the proficiency of less flourishing dental surgeons in anæsthetic work is at least not ideal.

Nor can much weight be attached to a statement that "the administration of anæsthetics is an integral part of the practice of dentistry." This is a somewhat cryptic pronouncement, the validity of which depends

entirely on what is read into it. That dentistry without anæsthesia would not be modern scientific dentistry at all is true: the same is very much more true of operative surgery. But to argue on that basis that a dental surgeon is well advised to anæsthetise his patient and then extract his tooth would be as foolish as to suggest that a general surgeon can equally afford to dispense with an anæsthetist. This is, after all, the main crux of the question; whether or no dentists are to be allowed to go on extracting under gas which they have themselves administered. There can be no doubt that the system is vicious, and ought, if possible, to be abolished; there is also no doubt that the anæsthesia obtained by those dentists who follow this practice is very often most imperfect. On the other hand, it is urged that statistics of deaths under gas administered thus do not bear out the view that the danger is of any but the most minute dimensions; and it must be admitted that very few such deaths indeed are on record compared with those from the major anæsthetics used in surgical practice. Lastly, the Dental Association holds that the omission of local anæsthesia is calculated to defeat the object of the Bill. For the prohibition of general anæsthetics to dentists would merely lead to a greater extension of the practice of using local anæsthesia. On general principles we think the Association is here most certainly in the right. Moreover, whether dentists are or are not to be made exceptions, the non-medical public should certainly be prohibited from the use of dangerous drugs for producing local anæsthesia. To the argument that the Bill will make extraction under gas too costly for large sections of the community we have already given prominence. This is probably one of the strongest parts of the Dental Association's case; and it is a consideration of much moment. As not infrequently happens, the dictates of scientific perfection and of material practicability seem to be for the time being irreconcilable. To anyone who can show how to satisfy fully the demands of both, dentists and doctors will both owe a debt of gratitude.

ANNOTATIONS.

Reconciliation and Co-operation.

We have always believed that the wide differences of opinion which separate ourselves and the great body of medical and scientific men from the conscientious humanitarians need not prevent these two bodies of civilised persons from coming to some sort of terms, or at least uniting in a common campaign against wanton cruelty. There are immense numbers of educated and thoughtful persons, who differ from us upon the ethics and practical value of animal experimentation, but with whom we are willing to co-operate in the furtherance of humane objects which we as well as they have at heart. Quite lately we have had practical evidence of this spirit of mutual forbearance and common aspiration, and we feel that it is our duty to publish an outline of the circumstances. Many of us still hope to convince some at least amongst the earnest and sincere antivivisectionists, not only that vivisection is not as black as it is painted, but, that, as practised in England at the present day, it is not black at all, but far otherwise. And we have little doubt that the more tolerant and open-minded members of the humanitarian party live in hopes, for their part, of convincing us of the useless and retrogressive immorality of animal experimentation, even if we could prove to them that (as is almost exclusively the case) the researches are conducted under proper and complete anaesthesia, and with careful regard for the animals' feelings both before and after the experiments. Upon this ground we fear that we shall never agree; but we are glad to recognise that in fighting an abominable practice humanitarians and ourselves are willing and able to join forces. A few weeks ago we wrote confidentially to the Humanitarian League, drawing the attention of that society to the gross and nauseating barbarity of the method of skinning large snakes for commercial purposes which still exists in certain islands, happily not part of the British Empire. Our information came from a translation in *The Literary Digest*, and in his courteous reply to our letter Mr. Henry Salt, the Hon. Secretary of the League, concludes in the following terms, which to us are full of encouragement and promise: "I can assure you that we cordially welcome your kind co-operation, and that while we of course differ from you and your friends as to the wisdom of certain methods of research, we are quite aware that wanton cruelty is a wholly different matter, on which you feel as we do."

Hygiene and Christian Science.

The proceedings at an inquest held last week upon the body of a lady who died at Sutton whilst residing as a patient with a household of Christian Scientists (self-styled) have been reported at some length in the daily press. There is little to distinguish this case from many others which have been made public in a similar way during recent years, unless it is that the "treatment" had less to do than is usual with the fatal issue, though it seems fairly clear that the unfortunate Miss Latour would have lived longer and suffered less had she never adopted the tenets of this

peculiar sect. In commenting on these sad cases, there is always a tendency to regard exclusively the patient, and his or her individual disease and its neglect. But there is frequently a much wider aspect of matters, that in which the public health is concerned. The particular patient in the present instance was a sufferer from chronic pulmonary tuberculosis. She was treated at Kew by one of the practitioners who gave evidence at the inquest, and when he last attended her, some fifteen months before her death, the disease was entirely latent. Afterwards the tuberculosis evidently became once more active, with the result that the case came before the coroner. During this active period the patient was no doubt a source of grave danger to all who came into intimate contact with her; for, having been converted to Christian Science, she refused to have medical attendance. If the contention is to be admitted that there is no such thing as pain or disease, we presume it follows that there is no such thing as infection, and that prophylactic hygiene is useless. We have no information whether this is so, or whether the prevention of contagion is considered a suitable subject of prayer by Christian Scientists; but at any rate the significant fact emerges that the younger sister of the deceased, who lived in the same house until a few days before the latter's death, is now suffering from tuberculosis and has been removed to a sanatorium. When all is said and done, it is to the education of the public in hygiene that we must chiefly trust for the discrediting of these amateur therapeutists. There are at least twelve Sutton householders who, to judge by their verdict, are convinced that true science would have done better for Miss Latour than faith-healing did; and they have had a practical lesson in the tuberculosis problem which it is to be hoped they, and the rest of the public, will take seriously to heart.

The Declining Cabman.

THE appeal which Lord Rosebery has made on behalf of the London cabman, and with which the *Daily Mail* has so promptly and generously associated itself, is one which, we feel sure, will be cordially endorsed by every member of the medical profession. In the past the cabby has proved a good friend to the London doctor, and the present distress that threatens him is due to no fault of his own, but entirely to the altered conditions produced by the advent of the motor-taxicab. Practitioners and consultants cannot be blamed for using the more up-to-date and expeditious mode of conveyance in preference to the slower and more old-fashioned hansom, but they, above all, will recognise the gravity of the cabman's case, and join in the attempt to improve it by supporting a fund whose objects are to teach the younger men to become motor-drivers and to make provision for the immediate need of the older cabmen who, through age or for other reasons, may be compelled to seek another means of livelihood. Contributions towards the fund may be forwarded direct to the *Daily Mail*, which has undertaken the secretarial and executive work in connection with the appeal.

MEDICAL OPINION AND MOVEMENT.

THE Experimental Production of Choked Disk has been the object of investigation by Drs. H. Cushing and J. Bordley, Jun., in the Hunterian Laboratory of the Johns Hopkins Hospital. They find that the introduction of fluid under tension into the intra-cranial subdural space will produce an acute œdematous swelling of nerve head and retina—that is, a choked disk—which can be detected both by the ophthalmoscope and by post-mortem examination. Simple digital compression through a trephine wound produces the same result; and distension of the optic sheath accompanies both this and the fluid pressure. On the other hand, venous congestion alone cannot produce more than the congestive features of optic neuritis. With the idea of simulating the increasing pressure of a growing tumour they then introduced fragments of compressed sponge tent between the skull and the dura. These swelled gradually, and caused all the signs of choked disk as it is seen in spontaneous tumours: whereas a solid aseptic body which does not alter in size does not cause such changes. They pronounce, therefore, strongly in favour of the strictly mechanical theory of the production of optic neuritis, and express the view that decompression by tapping the cerebrospinal fluid may be followed by subsidence of the process, even when it is of considerable extent: provided, that is, that the stage of new tissue formation has not been reached.

A CURIOUS inter-relation of the Pancreas and the Supra-renal Bodies functionally seems to be revealed by certain experiments and deductions of Loewi, published in the *Archiv. für Experim. Path. und Phar.* In health suprarenal extract does not cause any dilatation of the pupil, although its action in the main is one of stimulation of sympathetic nerve fibres. This holds good both of man and of the lower animals, such as cats and dogs. But in the two latter after artificial total extirpation of the pancreas, suprarenal extract does dilate the pupil; and Loewi has further established that the same occurs in man in some cases of pancreatic insufficiency and in many cases of diabetes considered to be of pancreatic origin. The same is true of many cases of exophthalmic goitre. He concludes from these observations that the pancreas may have a function of inhibiting the action of the suprarenal glands upon parts of the sympathetic nervous system, and that the pupillary reaction he describes may assist in the diagnosis of diabetes and of pancreatic lesions in the human subject.

A NEW method of Recognising and Localising Ulcers of the Stomach and Duodenum is described in the *Medical Record* by Dr. Max Einhorn. He calls his proceeding the "thread impregnation test," and carries it out thus. At 9 P.M. the patient who is suspected of such an ulcer swallows a duodenal bucket in a gelatine capsule. The string is of braided silk (No. 5, English), and is moored to the shirt in such a way that the bucket can pass downwards for 75 cm. (about 30 inches) from the lips. The

apparatus is removed at 7 or 8 A.M. the next morning, the patient fasting until then. In favourable cases, particularly if the thread has come into intimate contact with the surface of the ulcer, a brown or dirty black discolouration reveals the distance of the lesion down the digestive tract. At 40 cm. from the lips an ulcer of the cardiac end of the stomach is indicated; at 44 to 54 cm. of the lesser curvature; at 56 to 58 cm. of the pylorus; and at 59 and upwards of the duodenum. Œsophageal ulcers can also be diagnosed by the same means; but those of the fundus and greater curvature are usually not disclosed. Dr. Einhorn has also found the method useful in judging the result of treatment: after liquid diet it is less marked than after coarser food. Simple ulcers cannot be differentiated from malignant. In order to locate ulcers of the fundus and greater curvature the author is experimenting with what he calls a "gastric stamper." This is an inflatable rubber balloon covered with silk gauze, which, when blown up through a tube after being swallowed, takes the shape of the stomach, and registers on the gauze a blood-stain from any ulcerated part. After half an hour, during which time the patient remains recumbent, the air is allowed to escape from the balloon, which is then withdrawn and blown up again. This latter technique can be done only upon those accustomed to lavage: the silk impregnation test can be carried on on anyone.

AT the recent German Medical Congress held at Wiesbaden, Dr. F. Widal contributed an interesting paper to the discussion on the Dechlorination Treatment of Bright's Disease. It will be remembered that this method of treatment owes its origin to a large extent to the researches of Dr. Widal. In collaboration with others he showed that the œdema of Bright's disease is the result of an accumulation in the tissues of the excess of sodium chloride ingested, which the kidneys, in their morbid condition, are unable to eliminate. By controlling the proportion of sodium chloride in the diet he has been able to cause œdema to disappear and reappear in patients afflicted with Bright's disease. The usual milk diet prescribed for these patients is found to be less suitable than an ordinary mixed diet deprived of salt. Reckoning the milk diet at 3 litres a day, it contains four times as much salt as an equivalent mixed diet deprived of salt, and includes nearly 3 litres of water and 120 grammes of albumen, which are considered altogether too much for many of those patients. The amount of chlorides that can be borne by a patient varies in different cases, and, after excluding it entirely from the diet until the œdema has disappeared, it is often possible to make certain additions without giving rise to recurrence of the symptoms. In the case of a milk diet about 1.6 gm. of salt are absorbed per litre. With a mixed diet without any addition of salt about 1.5 gm. of salt are taken per day, but with a specially restricted diet this may be reduced to 1 gm. per day. A dechlorinated diet not only arrests the œdema, but also affects the disease itself.

THE author distinguishes two conditions in the disease—chloræmia, in which there is retention of chlorides in the system; and uræmia, with retention of nitrogen products. When the kidneys fail to eliminate the chlorides from the system they are retained in the tissues, and by a process of osmosis they attract the fluid into the tissues also and give rise to œdema. On the other hand, the excess of urea accumulates in the blood, and the author is convinced that the œdema is in no way attributable to this agent. In many cases, especially in the last stages, the two conditions may be combined. In view of these facts the author emphasises the importance of ascertaining the proportion of urea circulating in the blood, as the presence of uræmia seriously affects the prognosis and the results that may be expected from the dechlorination diet. In cases of considerable chloride retention and marked œdema the urea may not exceed 20 to 50 centigrammes per litre of blood, and in such cases the chloræmia is the chief factor. When, however, the proportion of urea exceeds 1 gramme per litre, the presence of uræmia must be assumed, and the same expectation of a cure by the dechlorination diet cannot be entertained. In the discussion which followed several physicians testified to the excellent results obtained by the dechlorination treatment in cases of Bright's disease, and expressed the conviction that the symptoms of anasarca are due to the retention of chlorides in the tissues. Dr. Magnus-Levy pointed out that although the anasarca due to cardiac disease and cirrhosis of the liver is of a mechanical nature and cannot be affected in the same way, he found that in these conditions also a dechlorinated diet has the effect of reducing the dropsy.

AT the recent congress of the German Surgical Society at Berlin, there was the usual discussion on Anæsthetics. Neuber, of Kiel, gave some interesting statistics in favour of the use of scopolamine injections previous to operations. As a result of his inquiry into the administration of anæsthetics during the past year he finds that out of more than 71,000 administrations, chloroform was used in 20,615 cases, ether in 11,859 cases, a mixture of ether and chloroform in 10,232, and Billroth's mixture in 2,791. This shows a marked diminution in the use of chloroform. On the other hand scopolamine appears to have gained considerably in favour, as it is mentioned in 23,809 cases. The mortality figures are one death in 2,060 cases for chloroform, one in 5,930 for ether, one in 3,410 for the mixture of chloroform and ether, one in 698 for Billroth's mixture, and one in 4,762 for scopolamine. The author is of opinion that the mortality from ether has been largely reduced owing to the more general adoption of the open method of administration. He is strongly in favour of the preliminary injection of scopolamine-morphine. He injects 0. gr. 0005 decimilligr. of scopolamine and 0. gr. 01 centgr. of morphine an hour before operation. The advantages claimed are that the anæsthesia need not be deep, and it is unnecessary for the reflexes to disappear. There is no previous anxiety on the part of the patient, and in consequence of the light degree of anæsthesia complications are

avoided. Out of 300 consecutive anæsthesias there were no complications except one case of pneumonia. Other members also spoke in favour of scopolamine injections, but Sprengel, of Brunswick, stated that he had abandoned the use of the drug in consequence of a considerable increase in cases of pneumonia.

THE Surgical Treatment of General Suppurative Peritonitis formed another subject for discussion. Nearly all those who took part in the debate were in favour of thorough lavage with normal saline and drainage by means of tubes. On the other hand Sprengel and Roth adhered to the opinion that general lavage is dangerous and should be avoided, as it is liable to spread the infection and break down the natural barriers of resistance of the organism. There was also a good deal of difference of opinion shown in regard to the closing of the abdominal wound. While many prefer to close the wound entirely, except for the small openings left for the drainage-tubes, others advocate only a partial closure. Bochard, of Posen, injects sterilised olive oil into the peritoneal cavity on the ground that it hinders absorption by the peritoneum. He thinks that it also covers the irritated surfaces and prevents the formation of adhesions and intestinal paralysis. He injects 50 to 100 cubic centimetres. He uses lavage only in a moderate degree and does not drain. He sutures the peritoneum and muscular layers, but not the skin. By this method of technique he claims to have a mortality of only 26 per cent.

PROFESSOR PONCET and Dr. Lericke describe in *International Clinics* Articular Manifestations of Tuberculosis which are, they believe, frequently mistaken for ordinary acute rheumatism. The clinical signs of this Acute Tubercular Rheumatism differ very little from those which are usually held to be diagnostic of the real thing: the onset is sudden, the large joints are chiefly selected, the temperature and pulse-rates are both much raised. Further, there may be recurrences separated by intervals of complete health. The inflammation may flit from joint to joint; it may subside altogether in a few days, or assume a sluggish relapsing character with attacks of pain, or settle tenaciously in one joint which is ultimately crippled. Sometimes there are simultaneous inflammations of the pleura, pericardium, etc.; sometimes not. Salicylate treatment has no influence over these affections, which may be gradually succeeded by definite pulmonary or other tubercular symptoms, or may precede by years the complaints which finally, according to these authors, establish the true diagnosis of the articular trouble. In one of the numerous types described, the most affected joint becomes ultimately the seat of local tuberculosis. Consecutive or secondary acute articular rheumatism is also described as not uncommon in those already the subject of gross tuberculosis in other regions. The authors catalogue so many clear types of tubercular rheumatism that it seems very strange that such definite symptom complexes should hitherto have passed unrecognised.

THE *Sleeping Sickness Bulletin* for March, edited by Dr. A. G. Bagshawe, contains some very interesting papers on the Development of Trypanosomes in tsetse flies and the mode of transmission of trypanosomes by tsetse flies. Recently it has been a point of dispute as to whether the trypanosomes when sucked up by the tsetse fly develop in it, and so far most of the work done has seemed to show they do not. In the present edition of the bulletin, however, Dr. Bagshawe quotes a very important paper by Professor Kleine, from German East Africa, which, if confirmed, would seem to prove that they do. According to Professor Kleine, flies which for many days after the ingestion of blood containing trypanosomes were not infective afterwards became so, and infected a sheep and then an ox. This would place the subject on the same footing as malaria in the mosquito. It is only after 12 days or so, during which time the malarial parasite has been developing, that the mosquito becomes infectious. In Professor Kleine's series of experiments with trypanosomes in tsetse flies nothing happened where animals were bitten by infected flies up to the 17th day or longer, but after that infection is said to have taken place. The whole subject is of so great importance that it is to be hoped that these experiments will be quickly confirmed or refuted by other observers.

A MOST important research upon the *Ætiology* of Endemic Goitre has been carried out in Kashmir by Captain R. McCarrison, I.M.S. As a result of experiments upon himself and several other people who volunteered to be made the subjects of research, he has shown that goitre can be set up by the administration of the suspended matter removed by filtration from waters which are known to be goitre-producing. When this suspended matter is boiled before being ingested no goitre is produced: the disease is therefore due not to mineral, but to biological components of the suspended matter; in other words, to a pathogenic micro-organism. The incubation period of goitre thus experimentally produced is thirteen to fifteen days, and it can be cured by the administration of intestinal antiseptics. It seems probable, therefore, that the specific organism is parasitic in the human intestine: in the *fæces* of most of those who suffer from goitre in Kashmir an amoeba is plentifully found, but whether this has anything to do with the disease is not yet established. In view of these remarkable findings it would be of interest to know whether the same facts hold good of endemic goitre in other parts of the world, especially Switzerland.

TO the tuberculin ophthalmo- and cuti-reactions must now apparently be added a third—Mantoux's Intra-dermo Reaction—recently described in *La Presse Médicale*. One c.c. of a 1-5000 tuberculin solution (Pasteur Institute) is injected in the manner indicated. Positive signs are infiltration in a few hours, and after twenty-four a surrounding area of erythema; in forty-eight the reaction is at its height. General disturbance usually fails,

although there is sometimes some fever. The reaction is more acute than Pirquet's cuti-reaction, and it is also stated that, whereas the latter gave nine negative results out of 52 children tried, these nine cases came positive with the intra-dermo reaction. Professor Hutinel reports on it after a more extended trial that it is the most certain and safest of the three tests, with the qualification that it only indicates that the organism is tuberculous, not that any given lesion is so. He recommends it especially for children, although one would think that the fact that it must often be a rather painful procedure would be some slight hindrance to its use in pædiatrics. Two other recent papers are of interest in the above connection. Chauffard and Troisier in the *Bulletin Médicale* say that in the course of their trial of the intra-dermo reaction they were struck by the resemblance of the appearances obtained to those of erythema nodosum, having been able to produce at will in a tuberculous subject typical nodules of this affection. They put the question whether erythema should be considered a manifestation of bacillary septicæmia—in short, an atypical cutaneous tuberculide. Lévy-Franckel (*Revue de la Tuberculose*, No. 5) tried the ophthalmo-reaction on three subjects of erythema nodosum, with a positive result in each case. In spite of this, however, he does not believe in a tuberculous nature of this disease.

THE position of graduate students of medicine, and, indeed, the whole subject of Graduate Study in Medicine will be discussed by a special committee at the forthcoming International Congress of Medicine to be held at Buda Pest during the present summer. Professor Kuttner, the veteran leader of the graduate study movement in Germany, who is so well known to all those who take an interest in the movement, for the good work that he is doing at the Kaiserin Friedrich Haus in Berlin, will adequately represent the German graduate study societies and associations, while other representatives will be sent from Belgium, France, Holland, Russia, Italy, and America. It is to be hoped that England will be suitably represented, and that the labours of the committee, which, as we understand, will be mainly directed to the creation of an international committee, will be crowned with success. The committee which it is contemplated to start will be a permanent one, with representatives in all large cities where there exist facilities for graduate study. It will cater for the graduate student exclusively, and will attempt to do for him in international matters what the present local committees are doing in provincial matters. There is, we believe, urgent need for such a committee, and its creation will be cordially welcomed by the large number of present-day graduates, since it will enable them to obtain first-hand and reliable information concerning the special points on which they desire to be enlightened with regard especially to time, place of study, classes and fees. The committee will work in unison with the established medical Press in the various countries, and will from time to time publish official notices and pamphlets for the benefit of graduate students.

HOSPITAL CLINICS.

MODERN VIEWS ON HEREDITY.

By R. MURRAY LESLIE, M.A., B.Sc., M.D., M.R.C.P.; Senior Physician to the Prince of Wales's General Hospital, Physician to the Royal Hospital for Diseases of the Chest.

(A Lecture Delivered at the N.E. London Post-Graduate College.)

(Concluded from page 61.)

IMMUNITY FROM MICROBIC DISEASES.

As Sir William Church well expresses it, "no disease which arises from or is associated with the presence of a foreign body, living or dead, within us can be considered hereditary." Thus *syphilis* is not a hereditary disease. Congenital it certainly may be, as the contagion can pass from mother to child. This is not heredity, but intra-uterine contagion. It is undoubtedly true that in certain families and races there is a tendency to, or an immunity against, various kinds of bacterial disease. Certain families seem to afford a more favourable home for the invading organism. Immunity from such disease appears to be associated with certain bio-chemical changes in the body fluids. Does a race acquire and transmit an immunity to a specific microbial disease? How else can we explain the extinction of *leprosy* in England, which was formerly endemic throughout the country?

Influenza is a much less fatal disease at the present time than it was when it was reintroduced into England in 1890. *Measles*—a comparatively mild disease in Europe—manifests great malignity when introduced into virgin soil amongst savage tribes where the disease has been previously unknown. Instances might be multiplied indefinitely in support of the view that immunity can be inherited. Ehrlich expressed the interesting opinion that the relative degree of immunity to certain bacterial diseases may in part be due to the infant imbibing in its mother's milk certain protective substances derived from the body cells. Whether this be true or not, there is abundant evidence in support of the generally accepted belief in the doctrine of a gradual acquirement by inheritance of an increase of racial immunity.

Tuberculosis as a disease is never hereditary. The organs of new-born children are sterile. Although a few rare cases have been described of children born tubercular, it does not in any sense follow that the disease was inherited. It simply means that the mother may have suffered from genital tuberculosis, and as a result there was accidental transmission of the tubercle bacillus to the child *in utero*. It has been asserted that the ovum at the time of impregnation may become infected through the spermatic fluid emanating from a man suffering from tuberculosis of the testicle. No proof of such an occurrence has been adduced.

The question of the hereditary transmission of a predisposition to tuberculosis stands on quite a different footing. Even here, however, many recent authorities have gone so far as to disclaim all belief in hereditary predisposition. They allege that when a member of a household becomes tubercular the tendency of infection of other members through frequent association is necessarily much greater, and that this constant exposure to infection sufficiently

accounts for the disease selecting particular families and, it may be, affecting several generations in succession.

A review of the general evidence, taken in conjunction with my own experience as a physician to a consumption hospital, makes me entirely dissent from this view. I am convinced that opportunity of infection, though by far the most important factor, is not the only one to be considered in the incidence of tuberculosis. It is a matter of common knowledge that the disease attacks unequally those who are equally exposed to the same external conditions of infection, and it is not necessarily persons debilitated through malnutrition or from some other cause who are attacked. Members of certain families are particularly susceptible and are prone to be attacked, even if placed in favourable conditions.

The results of hospital treatment are certainly more unfavourable among patients with a strong tubercular family history. Though I am convinced that there is this hereditary proclivity to the disease, yet it is so much less important a factor than opportunity of infection that in my opinion there is no valid reason for anyone to abstain from marriage simply because there is a marked family history of consumption. I would go even further and allege that there is no grave objection to a young man marrying who himself exhibits evidence of arrested disease. It is different in the case of a young woman, who with latent disease is apt to have an acute exacerbation after childbirth. Even in the latter case, the child will be born perfectly healthy, and if placed in suitable hygienic conditions will probably never develop the disease.

What actually is inherited is most probably a vulnerability of the protective epithelia, and accordingly a diminished resistance to the inroads of the ubiquitous bacillus. It is possible that the diminishing incidence of the disease may be due in some measure to a partial immunity connected with biochemical changes in our bodies and inherited in the course of generations from tuberculous ancestors in whom the disease has been cured. Professor Calmette was certainly successful in producing such immunity in certain animals.

GOUT AND HEREDITY.

It is commonly believed that this disease is engendered by high living and that when once established it is capable of being transmitted hereditarily. Probably what is inherited is a special variation which expresses itself in an altered mode of eliminating nitrogenous waste-products. This tendency is simply rendered manifest by certain external agencies such as dietetic excesses. Dr. Garrod has in his recent Croonian lectures drawn attention to the complex nature of what he terms "inborn errors

of metabolism," and brings forward evidence indicating that certain errors in metabolism such as cystinuria and alkaptonuria appear to run in families, and suggests that further research may determine how far their manifestations may be in accordance with Mendel's law of heredity. The gouty habit of body may have arisen as a variation, and as such is transmissible by inheritance.

CANCER.

Cancer is still popularly believed to be a typical hereditary disease. There is no evidence whatever that the actual disease can be transmitted by inheritance, and no very definite proof even of hereditary predisposition. It is known that certain species among the mammalia are much more liable to certain forms of cancer than others. Thus cancer of the breast, so common in women, dogs, and mice, is practically unknown in the cow, which, however, frequently suffers from cancer of the liver. Such tendencies would seem to depend upon innate characters transmissible by inheritance. The examination of statistics in connection with cancer in man has induced such an authority as Weinberg to conclude that heredity does not play a prominent part in the incidence of cancer. Dr. Bashford states that there is no evidence of cancer arising as a transmissible variation, and believes that the disease is probably always acquired. Experimental evidence in the case of cancer in mice strongly supports Dr. Bashford's contention. Mr. Butlin, on the other hand, thinks that some individuals have a special inborn susceptibility to cancer.

NERVOUS AND MENTAL DISEASES.

It is an undeniable fact that many forms of nervous disease are markedly hereditary. This is admitted by practically all alienists and neurologists. Sir William Gowers recently asserted that in at least 50 per cent. of cases of *epilepsy* and *insanity* there is a family history of one or both maladies, in antecedents and present or past collaterals.

Rohde, in 1895, argued that in all such cases a special germinal variation is inherited which may express itself in various ways—*e.g.* in a general neurasthenia or in an acute neurosis such as mania, in the presence of a sufficiently powerful exciting cause. Thus the functional disturbance associated with puberty may predetermine an attack of acute hysteria and epilepsy, while the stress of early adolescence superadded to profound emotion may induce an attack of acute mania.

A neurotic heredity—according to Clouston—consists in the inheritance of general morbid tendencies rather than direct proclivities to special diseases. As proving the fact of an hereditary psychopathic constitution, he refers to the family history of one of the European Royal families which for 200 years has exhibited manifestations of this constitution in nearly all its varieties.

As regards the hereditariness of neuroses, Weismann himself makes the important admission that environment, including dietetic conditions, may affect the germ-plasm. If nutritive disturbances can affect the germ-plasm it is only reasonable to suppose that the embryo may be affected disadvan-

tageously through the mother. Clouston considers that a good heredity consists in the power of the fertilised ovum to integrate, develop, and mature along normal lines from the first fusion of the germ and sperm cells up to the full development of the individual. If this power be debased by altered nutrition or in any other way, there is at once a practical explanation of many neuroses. According to this observer the most important neuroses arise during the period of development owing to some defect in the maturation of the cells and tissues. A consideration of the marvellous structure and functions of a typical brain cell (of which there are about 400,000,000 in each individual) makes it apparent that a very small deficiency in the nutrition of the germ-plasm may readily result in the arrest or debasement of the developmental process in groups of these cells. Hereditary neuroses, according to Clouston, are due to arrests of maturation of the cells that constitute the nerve centres. Certain individuals exhibit weakness in the nutrition of the germ cells, and accordingly have not the power to develop into full maturity, this defect recurring in successive generations.

It is a fact that a large proportion of the cases of epilepsy and other neuroses occur during the period of development, while insanity in its most marked and characteristic phases also occurs during the developmental period. The strain associated with the sexual and reproductive instinct at adolescence proves too severe for the defective power of resistance of non-matured or debased brain-cells. It is this tendency to arrested or imperfect maturation of brain-cells that is handed down to successive generations. It is rarely that a specific form of insanity is transmitted: it is more often a general nervous instability.

As regards *dipsomania*, there is no doubt of the fact, whatever may be the explanation, that in certain families there is a tendency to alcoholic excess. Dr. Clouston holds that no man is born with a craving for alcohol, but individuals are born who exhibit a morbid reactivity to alcoholic stimulants and a lack of the higher inhibitory mental powers. A man with such a neurotic or psychopathic tendency would, by indulging in even a small quantity of alcohol, lose mental power and strength of mind with each repetition of the dose, and in time would degenerate into a confirmed dipsomaniac. It is a special nervous instability and not a love of alcohol which is inherited.

Certain special forms of nerve diseases—more particularly the myopathies—are markedly hereditary. One might specially mention *hereditary ataxy* (*Friedreich's disease*), *Marie's ataxia*, *Déjerine's facial paralysis*, *Thomsen's disease*, *Huntingdon's chorea*, *congenital optic atrophy*, and *night-blindness*. Some of these diseases have been traced through as many as five generations, and the incidence is sometimes strikingly in accordance with Mendel's "Law of heredity."

SEX LIMITED DISEASES.

We shall now refer to the interesting group of diseases manifesting a maternal heredity. It includes *pseudo-hypertrophic paralysis*, *colour blind-*

ness, hæmophilia, and hereditary optic atrophy. In the case of pseudo-hypertrophic paralysis, for instance, the males alone exhibit the disease in a typical form; the heredity is maternal only; the affection never being transmitted by the father. The tendency must therefore be germinal—a potential defect in that part of the ovum which will become the muscles of the male. The female children escape, but they inherit the tendency—or some of them do—and may transmit the disease to their sons. In the ova from which the daughters develop, the potentiality of the disease is not in the elements that develop into muscles, but only in that portion of the protoplasm which will become their germinal tissue and form the muscles of the male offspring.

Colour blindness is found to be a "dominant" character in males, and "recessive" in females. A female will not be colour blind, as Professor Bateson points out, unless she has had two doses of colour blindness, one from each of her parents. The colour-blind female must have had a colour-blind father and all her sons will be colour blind. The male who is not colour blind cannot pass it on, but the male who is colour blind can pass it on, and on an average half his sons will be colour blind and half his daughters will be able to transmit the condition.

Diabetes insipidus, tylosis palmaris, polydactylism, hay fever, congenital asthma, congenital cataract, baldness, and albinism are also hereditary. Mr. Mudge, at the recent discussion on heredity at the Royal Society of Medicine quotes Dr. Drink-

water's case of congenital asthma, which is quite Mendelian in that the affected persons transmitted the disease, while the unaffected did not, also in that some individuals were asthmatic while others were quite normal. The proportion of asthmatic and normal individuals in the descendants of parents, one of whom in each pair is asthmatic, and the other normal, is that predicted by Mendelian principles. An equal number of each is expected, and if we assume that the original pair consisted of a normal and an abnormal member, then there are ten asthmatic and ten normal descendants.

There is still a great controversy waging as to the application of Mendelism to the incidence of hereditary disease. While Professor Bateson on the one hand is enthusiastic as to its value, Professor Pearson states emphatically that there is no definite evidence of the applicability to man of Mendel's law of inheritance. The matter must for the present remain undecided until there are more collected data on which to form an opinion. In the meantime, the medical profession will do well to consider Professor Pearson's advice, to go on collecting reliable pedigrees, which necessitates a great deal of care and trouble. Dr. Bullock goes so far as to assert that very few pedigrees published during the last 200 years are of any use—certainly not more than 20 from all the hospitals—and adds that when a large number of really good pedigrees are obtained it will be time enough to speak about theories of inheritance.

CLINICAL NOTES.

A NEW ATTACK ON THE CANCER PROBLEM.

By DAN MCKENZIE, M.D., F.R.C.S.E.

IN an interesting series of articles by Mr. H. C. Ross and Dr. C. J. Macalister* of Liverpool, the attention of those interested in cancer research is diverted from the local disease-process and directed to certain changes in the blood, which these observers suppose, may be responsible for the local outbreak.

Ross, seeking for a method by which living could be differentiated from dead leucocytes, hit upon the plan of supplying excitants to the cells, so that those which are alive give evidence of their vitality by pushing out pseudopodia, while those which are dead lie inert. His fellow-worker thereupon suggested that the blood of cancer patients should be examined, by bringing it into contact with healthy leucocytes, in order to ascertain whether or not it contains a similar excitant of leucocytic activity. Curiously enough, it was found that the blood-plasma of cancerous patients does possess this property. Finally, the discovery was made that the response of lymphocytes to the excitant action of the blood-plasma of cancerous individuals differs from that of leucocytes. In the case of the latter, the irritation induces the protrusion of the familiar pseudopodia; but in the case of the former, the processes of cytoplasm protruded by the lympho-

cyte have a flagellate appearance, and, bearing as they do, a well-defined granule at their terminal extremity, present a close resemblance to spermatozoa, a resemblance which is heightened when the flagellæ break off from the cell and appear to move about in the surrounding plasma.

Struck by this similarity in appearance to spermatozoa, Ross and Macalister suggest, in a bold flight of the imagination, that these flagellæ may actually possess a fertilising power, in virtue of which, when brought into contact with certain tissue-cells, they may set in motion that form of vegetative reproduction we know by the name of "cancer."

As to the nature of the excitant in the blood which causes the lymphocytes to manifest these phenomena we are in the dark. But the authors remind us that methylene blue and other coal-tar products possess the property of stimulating leucocytic activity, and that exposure to soot, coal-tar, etc., predisposes an individual to cancer. The frequency with which cancer develops in regions of the body exposed to irritation, and in organs which manifest phases of great physiological activity is explained by ascribing it to the presence in the parts so affected of a copious quantity of "reproductive blood"; that is, blood which has the power of stimulating or originating the reproduction of tissue-cells.

* *Lancet*, January 16, 1909, p. 152 and p. 154. *Brit. Med. Journ.*, January 23, 1909, p. 206.

Most of this argument is, of course, pure hypothesis, and, indeed, hypothesis of a very fragile structure in certain respects. Why, for example, should we not look upon the activity of leucocytes and lymphocytes in the presence of cancerous blood-plasma as evidence rather of a protective effort on the part of the blood-scavengers, than of a method by which the cancerous growth may be induced? It is generally recognised that cancer-cells which find their way into the blood quickly perish.

At the same time the argument is so bold and suggestive that it deserves, and doubtless will

receive, a better fate than to be annihilated by theoretical objections. In the difficult problem of cancer, as in every other investigation of nature, it is the imagination that opens up to us new avenues of approach. We may, therefore, permit ourselves to hope, with some amount of confidence, that Messrs. Ross and Macalister, not only by their observations and discoveries, but also by their stimulating theories, have initiated an attack, pushed forward from a fresh base, which may bring us nearer to the removal of the reproach of scientific medicine—cancer.

MEDICINE.

EXAMINATION OF THE PUPILS.—IV.

THE LIGHT REFLEX (*continued*).

It is clear that there may be a blockage in the reflex arc in any of the following situations:—

(1) The retina; (2) the optic disc; (3) the optic nerve; (4) the optic chiasma; (5) the optic tract; (6) the nuclear cells of the third nerve, pupillary portion; (7) the third nerve, pupillary fibres; (8) the iris.

In order to facilitate the discussion, it will be assumed in each case that the right side is affected, and that the left side is healthy; and also, although it is quite common for the lesions to be partial, they will be assumed to be complete.

(1) The retina; (2) the optic disc; (3) the optic nerve. These may be taken together because the effects of total lesions of each of them upon the pupillary light reflex are identical. Light thrown into the right eye will cause no contraction of either pupil, whilst light thrown into the left eye will cause contraction not only of the left pupil, but also of the right. There will, of course, be complete blindness of the right eye.

(4) The optic chiasma: Here the lesion cannot, as a rule, be called either right or left, because it is nearly always median. A tumour of the pituitary body is a well-known cause of it. If large enough, the tumour may destroy the whole chiasma, causing total blindness of both eyes and total loss of light reflex in both eyes. In an earlier stage, however, the decussating fibres alone become affected. Light thrown into the right eye will cause contraction of the right pupil, but not of the left—or very much less of the left; and light thrown into the left eye will cause contraction of the left pupil, but little or none of the right.

The above is only true, however, when the light is sufficiently abundant to fall upon all parts of the retina. If a single small pencil of rays is used, owing to blindness of the nasal halves of the retinae (bilateral temporal hemianopia) there would be no contraction even of the pupil of the same side if the rays fell only on the nasal half of the retina that was being tested. This, however, is a refinement that will be obvious to all who think the matter out.

(5) The right optic tract contains fibres coming from the temporal half of the right retina and

from the nasal half of the left retina. A complete lesion of it will therefore cause blindness of these, and consequently the patient will be unable to see anything to the left of him when his eyes are directed straight forward. As regards the pupil reflex, ordinary daylight entering the right eye will cause little contraction of the right pupil, but quite a good one of the left; whereas light entering the left eye will cause a good contraction of the left pupil and little or none of the right.

If pencils of light are used in carrying out the test, and the pencil is allowed to fall upon the temporal half of the right retina, or upon the nasal half of the left retina, there will be no contraction of either pupil; if it falls upon the nasal half of the right retina, the left pupil may contract more briskly than the right; and if it falls upon the temporal half of the left retina, the left pupil may contract well, and the right not at all.

(6) When there is a generalised degeneration of the nuclear cells of the third nerve, there will be a corresponding paralysis both of the external and of the internal muscles of the eyeball—external and internal ophthalmoplegia. One sees this condition sometimes as the result of chronic alcoholism and syphilis. Better known than this, however, is the condition of Argyll-Robertson pupil; whilst the external movements of the eyeball may remain perfect, there is complete loss of the pupillary light reflex, but at the same time the pupils still contract quite well when the eyes are converged as in the act of accommodation. It is believed that this peculiar anomaly is due to degeneration of only those nuclear cells of the third nerve which are concerned in the movements of the pupil, all the other adjacent cells in the nucleus remaining intact. The condition is best seen in locomotor ataxy—so much so that there must always be some hesitation in diagnosing a case as one of tabes dorsalis unless there is what is generally spoken of as “an Argyll-Robertson pupil.” It is important to remember, however, that about one case in ten of locomotor ataxy has normal pupillary reactions; and conversely there are certain persons who have had syphilis and who have an Argyll-Robertson pupil without ever developing symptoms of locomotor ataxy.

(7) If the pupillary fibres of the third nerve could be completely destroyed without injuring the other fibres in the nerve, the result as regards the pupillary reactions to light would be precisely similar to that of the focal nuclear cell degeneration upon which the Argyll-Robertson pupil depends. A focal lesion in the nerve is infinitely rarer than a focal lesion in its nucleus, however. A loss of light reflex due to a lesion in the third nerve itself is therefore nearly always associated with other signs of third nerve paralysis, such as ptosis, or strabismus, from ophthalmoplegia externa. It is possible, however, to have no ophthalmoplegia externa and yet to have complete ophthalmoplegia interna. Post-diphtheritic neuritis sometimes picks out just those fibres whose absence leads to ophthalmoplegia interna. Another cause of the condition is subacute alcoholism.

In testing the contractility of the pupil on convergence, the patient is asked to look steadily at some fixed object as far away from him as possible; he is then suddenly asked to look at the observer's finger or some other object such as a match, held about five inches in front of the nose. In accommodating to look at the near object a powerful effort of convergence is made, and under normal conditions the pupil contracts briskly and considerably

in association with this voluntary act of convergence.

Presence of this power to contract upon accommodation when contractility to light is lost constitutes the Argyll-Robertson pupil discussed above. Complete ophthalmoplegia interna includes loss of contractility both to light and to accommodation, as also already described. It only remains to mention first, that it has been stated that in some cases of diabetes mellitus the pupil may be unable to react to accommodation though it still reacts to light—a statement that is not borne out by the facts in the great majority of diabetic patients; secondly, there is sometimes an inability to converge the eyeballs in the subjects of exophthalmic goitre, in which case the pupil may or may not contract when the effort is being made; and thirdly, there is a peculiar reaction of the pupil in some alcoholic subjects. The pupil may seem at first to contract properly both to light and to accommodation; but if a careful observation is made, it will be seen to maintain its first contraction for but a very short time only, thereafter dilating again even to a greater diameter than before, and sometimes contracting and dilating through a short series of alternations which might well merit the title of the "oscillatory pupil reaction."

VINCENT'S ANGINA.

VINCENT'S angina is a variety of tonsillitis or sore throat which is apt to be mistaken for diphtheria, especially as it may occur in epidemics.

Clinically the disease is at first membranous, and later ulcerous or ulcero-membranous, so that it is particularly at its commencement that it simulates diphtheria. After the second or third day ulceration occurs beneath the false membrane, and presently an undoubted ulcer is apparent. The membrane is fairly soft, whitish in colour, and gelatinous. It may occur not only upon the tonsils, but also upon the anterior and posterior pillars of the fauces, the uvula, the posterior pharyngeal wall, and the buccal mucosa.

The breath becomes foul; dysphagia is a more or less prominent symptom; and the voice is often husky, nasal, or otherwise abnormal. The submaxillary glands become enlarged. The temperature is most raised during the first day or two of the illness, generally reaching to something between 100° F. and 102.5° F. There is little or no tendency for the enlarged glands to suppurate. Neither skin rash nor articular symptoms occur.

The lesions are dependent upon a particular bacillus which is remarkably fusiform, elongated, and often somewhat curved. This micro-organism, which has been styled the *bacillus fusiformis*, retains the stain by Gram's method imperfectly. It occurs in enormous numbers upon the affected regions at the beginning of the illness, being often associated with streptococci, and notably with a peculiar spirillum. The detection of long fusiform bacilli and of these spirilla in stained films made from swabbings from the throat affords a positive diagnosis. The micro-organisms bear no resemblance to diphtheria bacilli.

The importance of distinguishing Vincent's angina

from diphtheria is at least threefold. In the first place, the sending of a case into a diphtheria isolation ward would be a very grave thing, for the concurrence of the two diseases would be serious. In the second place, the administration of anti-diphtheritic serum in a case of Vincent's angina would have no specific effect. In the third place, the prognosis of Vincent's angina is much more favourable than is that of diphtheria.

Treatment consists of local application of antiseptic washes—chlorine water administered with a syringe, for example, or carbolic lotion, chinolol lotion, or formalin solution painted on with a soft brush or sprayed on with a suitable apparatus. In mild cases a simple gargle may be all that is required. Treated with care the disease ordinarily gets well in one, two, or three weeks, and there seems to be no danger of the serious sequelæ of diphtheria—heart failure or palatal paralysis or peripheral neuritis.

If, on the other hand, the condition is neglected, it may last a long time. Vincent himself, for instance, records the case of a man aged twenty-four who was ill with it for six months and more, with alternate periods of improvement and relapse. The left tonsil was at first the site of a false membrane which covered in a small ulcer, whilst at the same time there was a feeling of lassitude and illness, with loss of appetite, headache, pyrexia, up to 102° F., and inflammatory enlargement of the submaxillary lymphatic glands. During later exacerbations both tonsils were very red and swollen. Upon one or other there would be soft, greyish white, well demarcated false membrane, perhaps the area of a threepenny piece or rather more, covering a shallow ulcer. This condition would be accompanied by fetor of the breath, difficulty in and pain on swallow-

ing, severe headache, and pyrexia, without skin-rash and without albuminuria. Cultivations from swabbings of the throat revealed no Klebs-Löffler bacilli. Films prepared from the false membrane

contained multitudes of fusiform bacilli, associated with some spirilla and many micro-cocci. Local treatment carried out with greater assiduity than before led to a cure within a fortnight.

THE NITRITES AND THEIR ACTION UPON HYPERTENSION.

THE exact extent, duration, dosage, and other points of therapeutic importance in the action of various vaso-dilator drugs in common use have been very carefully studied by Dr. E. Matthew, who has lately published his conclusions in a contemporary.* The author remarks that no extended series of observations upon the blood pressure of patients to whom these drugs are exhibited has been published in which accurate hæmomanometric records have been taken.

It is to be emphasised that, within limits, high blood pressure is not necessarily harmful to the patient in whom it exists; it is primarily a compensatory change, which may or may not achieve results of value to the economy, though, unfortunately, it is found often to tend to be progressive and ultimately harmful. The indications for and against interference with hypertension have not yet been worked out: but when in any given case it seems advisable to attempt by drugs to reduce an abnormally high blood pressure, it will be found best to rest content with a measure of success which still leaves the patient with a higher pressure than is usual in health. That is to say, a reduction of about 30 mm. of mercury gives better results in the relief of symptoms than any greater diminution will do, even when the original pressure is 80 or 100 mm. in excess of the normal maximum.

Again, it is a matter of common experience among physicians who prescribe nitrites or other vaso-dilators that there are great variations in the rapidity with which the different drugs produce an effect, and still greater variations in the length of time during which the effects last. For angina pectoris, asthma, and spasmodic conditions generally, where a rapid and considerable action is required, amyl nitrite is the dilator *par excellence*; its action, though transient, is both immediate and powerful, and its diffusibility insures its efficient absorption. As for the nitrites, which are given in the hope of securing a more prolonged vaso-dilatation, nitro-glycerine is the most rapid. The pharmacopœial preparation of this is liquor trinitrini, and its official dose is one to two minims. The latter quantity produces in most cases of hypertension a fall of pressure which begins always within ninety seconds, generally within a minute. The maximum fall is reached at the end of four and a half minutes, and is about 28 mm. of mercury; the subsequent rise is slower than the fall, but in all cases the effect of the drug passes off within half an hour. Further, nitroglycerine itself, given in tabloid form, has no action whatever of any sort; it is to be supposed that the tabloids are either pharmacologically inert, or that they remain undissolved.

The next most rapid in action are the nitrites of sodium and potassium, whose freshly prepared solutions are given in doses containing two or three grains. The onset of dilatation, judging by the manometric

reading, occurs in about five minutes; the maximum fall averages 32 mm., is complete in fourteen minutes, and is maintained for forty or fifty minutes; the natural level is reached about two hours after administration. It is found that such a dose given three times a day will keep the pressure down, not constantly at the lowest level of a single dose, but quite markedly. Tolerance is, apparently, not established, whereas with liquor trinitrini the patient will gradually respond only to larger and larger doses up to 60 minims or more.

Erythrol tetranitrate and mannitol hexanitrate are slower and more persistent still. The former was given in two proprietary forms, one of which (Martindale's) acted quite satisfactorily, whereas the other had not the slightest effect. Erythrol tetranitrate in half-grain and one-grain doses begins to act in five and a half minutes, and produces its maximum result in twenty-two minutes; mannitol hexanitrate (one grain) in twelve and a hundred minutes respectively. Both produce about the same degree of fall, namely, 35 mm.; both maintain their full effect for one to two hours, and do not cease to act altogether for five or six hours. There is no tendency to the establishment of tolerance; a dose of half to one grain will secure permanently a fall of about 30 mm. if given thrice daily. These two drugs are not so well borne as the inorganic nitrites; occasionally severe symptoms of over-action, probably due to individual susceptibility, are caused. Lastly, cobalto-nitrite of potassium, which has been employed chiefly in America, was tested. It is apparently quite inert, and has no vaso-dilator action at all.

It is worthy of note that Dr. Matthew finds some patients with marked hypertension who fail to respond to vaso-dilator drugs, or respond but very slightly. There are others in whom even an actual rise of blood pressure is produced; such patients are the subjects of advanced chronic inflammatory nephritis or arteriosclerosis, and in the earlier stages of their disease they respond to medication in the usual way. In cardiac and renal cases in which cedema is marked the nitrites may also prove disappointing; after the cedema has cleared up the usual vaso-dilator action may reappear.

The knowledge gained by this extremely careful and painstaking research places medical practitioners in possession of a much more trustworthy guide to the use of vaso-dilator drugs than they have hitherto had. It demonstrates the considerable advantages of ordering sodium and potassium nitrites instead of liquor trinitrini for persistent high tension, and the precise characters of erythrol and mannitol nitrites, drugs of which all students hear in their pharmacological lectures but few ever see administered. In view of the prevailing view that potassium salts depress the heart more than those of sodium, it is interesting to observe that Dr. Matthew can detect no difference in their reaction upon the blood pressure.

* *The Quarterly Journal of Medicine*. April, 1909.

SURGERY.

TORTICOLLIS.

CASES of torticollis may be divided into two main classes—(a) congenital and (b) acquired. In the first class the condition exists from birth or from a very early period, while the acquired variety may come on at any age, and the abnormality of the sterno-mastoid muscle may be ascribed to some definite cause. What is the actual cause of the contracture in the congenital cases is not easy to say. It is commonly held that the shortening of the sterno-mastoid is due to an injury at birth which causes a hæmatoma. The blood-clot is invaded by connective tissue cells, which develop into fibrous tissue. This contracts in obedience to its normal function, and the muscle is thereby shortened. This hypothesis has been objected to on two grounds: (1) that in many cases a hæmatoma was formed in the sterno-mastoid at birth, but torticollis did not follow; and (2) that in many cases of torticollis no hæmatoma has been observed. But in order to justify a hypothesis one has not to show that every case obeys the rule, but only a majority; and there are quite enough cases of torticollis in which a hæmatoma was observed to render the suggestion a tenable one. Those who object to the "hæmatoma" theory are inclined to regard malposition in utero and congenital syphilis as causative factors.

The acquired form is due either to rheumatism, which may cause in the first place a myositis of the sterno-mastoid—the so-called stiff neck—and the deformity may become permanently acquired from this small beginning—a kind of habit spasm, as it were. But more commonly cicatricial contraction of the skin resulting from burns etc., or an intramuscular abscess or gumma, may be the starting-point of the malady.

There is yet a third class of torticollis—the spasmodic. In this the contracture is due to irritation to some part of the nervous arc supplying the muscles of the neck. These cases are more complicated because of the complexity of the responsible cause or causes; and, secondly, because the sterno-mastoid is rarely affected alone, but it is usual to find also contractures of some of the muscles of the posterior triangle of the neck.

Thus the cortical centres of the nerves may be directly irritated, or the nerve trunks themselves may be pressed upon by inflamed glands, or the results of caries of the cervical spine, or the irritation may be reflex, and may be set up by a cause so apparently remote as carious teeth. In addition to the sterno-mastoids, one or other of the following muscles may also be affected: the trapezius, the splenius, the complexus, or the scalenus. In investigating the cause in such a case, caries of the cervical spine should always be eliminated.

In the first two groups of cases the sterno-mastoid is primarily at fault. As the result of its contraction the head is flexed and the chin is tilted to the opposite side and the shoulder is raised on the affected side. But other results follow later: the half of the face on the side of the contracted muscle is generally smaller than the sound side, and the features are less

developed. If the condition is allowed to persist secondary contraction of adjacent strands of fasciæ takes place, a point which must be borne in mind in treating the condition, since, if a successful result is to be obtained, these must be divided as well as the muscle which is primarily at fault. It has been argued that the ill-development of the face is due to a central lesion, but that it is more in the nature of a disuse-atrophy is shown by the fact that in cases in which the deformity is remedied by operation at an early age, the maldevelopment tends gradually to correct itself. When the case is examined the sterno-mastoid on the affected side can be felt to stand out as a prominent unyielding structure, more like a fibrous band than a muscle, as, indeed, in most cases it is.

The spasmodic cases differ in the picture presented. The subjects of congenital torticollis rarely complain of anything but the deformity. Sometimes they suffer discomfort from the unnatural position of the head, but most often they become accustomed to this, so that it hardly worries them at all. In the spasmodic cases, however, there is both intermittent spasm and pain, and, in contradistinction to the congenital type the affected muscles are hypertrophied rather than atrophic.

The treatment of the congenital cases is not difficult, and operation will usually improve the condition, although a perfect result is not always obtained. An operation is really the soundest procedure in all congenital cases, although it has been said that a successful result may be obtained by manipulation or mechanical means if the treatment is begun early. But the operation is a simple one, and leaves scarcely any disfigurement, and the treatment after operation is certainly shorter than in a case in which manipulative measures have been tried from the beginning. The operation consists in dividing the sterno-mastoid. This may be done either by subcutaneous tenotomy or by an open operation. The latter is much to be preferred. The only valid argument in favour of tenotomy is that it leaves little or no scar; but against it may be urged the difficulty of being certain that all resisting structures have been divided, and if any single one of them is left the operation will fail in its object. It has also been said that in tenotomy the external jugular vein may be cut, but this is a slight objection. The after-treatment is most important. The whole point of it is to devise some form of retentive apparatus which will keep the head in a rather over-corrected position. The simplest is to apply a plaster of Paris splint, which is made after the manner of a Bavarian splint for the leg, so that it can be taken off daily and massage and passive movement can be applied. In the acquired forms a cure can only be obtained by getting rid of the cause. In contracture due to cicatrization, a plastic operation, the details of which will depend in each case upon the particular condition found, will probably be necessary; and the after-treatment is the same as that described for the congenital variety.

ANÆSTHETICS.

THE PERCENTAGE ADMINISTRATION OF CHLOROFORM.

It is more than six years since Professor Waller first seriously called the attention of the medical profession and of anæsthetists to a densimetric method of determining the percentage of chloroform vapour in the air supplied to patients or animals during anæsthesia. At that time the contention that the rule of thumb methods thitherto, and still now, in vogue possess grave disadvantages was quite a novel one, and one which practising anæsthetists were disinclined to admit. There is no doubt that a good deal of their scepticism was based on the fact that the apparatus used by the eminent physiologist in certain demonstrations at London hospitals was clumsy, cumbersome, and not very efficient. On the other hand, the physiologists were able to retort with figures showing the dangers of chloroform administration by the old methods, though perhaps it was not always emphasised sufficiently how greatly this is reduced in skilled hands. At all events there was a certain division of opinion between physiologists and anæsthetists, which was largely due to the different standpoints of pure science and of commonplace expediency from which respectively the question was viewed.

Matters, however, have progressed since then; the latest contribution to the literature of the subject of percentage administration comes from the pen of a physiologist, and is as fully informed with practical suggestions as the most strictly empirical anæsthetist could desire. Dr. N. H. Alcock* has devoted much time and trouble to the investigation of the trustworthiness of an apparatus of which he published a description last year, and of the lessons which he, in conjunction with professional anæsthetists, has learned from its use.

He starts by pointing out that he makes as yet no attempt to measure the quantity of chloroform absorbed or to trace its fate in the body. The percentage of vapour in the inspired air is, as he remarks, the only factor under the absolute control of the administrator, and so for the present he confines himself to that. All machines for offering known strengths of vapour for inhalation are based upon one of two principles: either the inspiratory act of the patient draws air through a chamber containing chloroform, or else the air is propelled on a "plenum" system by artificial means to a closed space which includes the external organs of respiration of the patient. Dr. Alcock uses the latter system, as he believes there is less risk of obstruction to a free airway.

He first deals with the errors of method possible with his machine, and believes they amount at the outside to 0.1 per cent. The errors of the actual apparatus itself seldom also exceed this, but may occasionally reach 0.2 per cent. Then he determines whether variations in the quantity of air driven through the chloroform chamber have any effect on the percentage of the drug taken up, and he finds that between 20 and 8.5 litres per minute

they have none. The usual supply is 16 to 20 litres. The author then proceeds to consider the application of his apparatus in actual administrations by the St. Mary's Hospital anæsthetists. He plots out the details of each case by a graphic method which is both lucid and ingenious. Along the ordinate of his curves he marks a scale which shows the percentage of chloroform delivered, while the abscissa is divided into minutes of time from the commencement of the operation. The curves thus constructed show the rapid rise in the strength of the vapour offered, from nil to 2 per cent. (usually) at the end of two minutes by regular increments of a quarter per cent. every fifteen seconds. After this the rise is made more gradual, and is adjusted according to the needs of the individual case. Sometimes it is necessary to offer 3.5 per cent., the most which Dr. Alcock's apparatus allows; and in rare cases even this is not enough, but resort has been made to mask and drop bottle. In children, as is to be expected, less suffices, and 2 per cent. is as a rule enough, though to this exceptions occur. Stout people take more than thin, and alcoholic subjects more than all; as is well known. Individual peculiarities were also disclosed, not to be accounted for by any known factor. This again is a very old story.

The induction period is stated to be commonly eight to ten minutes. When induction is complete, 2 per cent. is generally ample, and this may be cut down to 1.5 in a few minutes, and to 1 per cent. within half an hour in most cases. The charts of actual administrations show very well what is called by Mr. R. Gill the law of diminishing resistance, the curve approaching the abscissa as the ordinate of vapour strength diminishes. Thus one patient was kept perfectly anæsthetised for two and a quarter hours, during the last ninety minutes of which time but 0.75 per cent. of chloroform was being supplied in the inspired air.

Another important lesson deduced, though here again it is a truth with which experienced anæsthetists are already familiar, is that the effects of overdose are not seen at once, but require about a minute for their development. When the mechanism of respiration and gaseous interchange in the lungs, and of absorption and distribution by the blood stream are considered, there is little in this to be surprised at. The practical point is more than ever brought home that incessant vigilance to detect the very faintest and earliest sign of overdosage is ever called for from an anæsthetist. Thus only can he take in time the measures necessary for the protection of his patient.

Dr. Alcock, after watching various anæsthetists at work with a mask and drop bottle, suggests that in most cases a somewhat stronger vapour than what he considers the optimum is delivered during the first two minutes, and a somewhat weaker one during the rest of the induction. A first-rate anæsthetist with a drop bottle is probably as reliable as with any mechanical apparatus.

* *British Medical Journal*, February 6, 1909, p. 325.

DISEASES OF CHILDREN.

THE TREATMENT OF WHOOPING COUGH.—II.

In a previous article we considered the general treatment of this affection and the local measures applicable to the nose and throat. The next group of remedies includes those which can be given by inhalation, either for the relief of the tracheo-laryngitis and secondary bronchitis or as local sedatives. One old-fashioned method was to send the child to gasworks to inhale the exhalations from the waste products. Whether these had any beneficial effect, or the improvement was due to the open air, is uncertain. Certainly it is inadvisable to use inhalations of coal gas, especially seeing that modern coal gas contains a high percentage of carbon monoxide. The chief drugs used for inhalation are compound tincture of benzoin; cresolin; creosote; benzol 1 in 10,000; iodide of ethyl; eucalyptus; the formalin lamp; terebene; thymol 1 in 5,000; and carbolic acid, of which 15-20 drops of a solution, 0.5 to 2.5 per cent. in strength, should be placed on cotton wool and inhaled for several hours daily. The latter may also be used as a spray, twice daily, at a distance of one yard from the child's head. The eyes should be protected by a bandage as it is liable to set up conjunctivitis. Some of these drugs can be dropped on a bib, constantly worn, so that the vapour is more or less continuously inhaled. Counter-irritants are of no value, except for secondary lung complications. A turpentine liniment may do good because the vapour is inhaled.

The number of drugs recommended for internal medication is very large; so great that there is little doubt the specific effect of any one of them is slight or absent. Belladonna still holds the first place in the minds of many. It reduces the number and severity of the spasms, checks the secretion of mucus, and is a cardiac and respiratory stimulant. It must be given in doses sufficiently large to produce erythematous flushing of the cheeks and dilatation of the pupils; ten minims of the tincture for each dose at six years of age, four minims at one year of age, every four hours. After a varying period it loses its effect. It can, with advantage, be combined with bromides in doses of 4-10 grains, as a sedative. Chloral hydrate is also a very useful sedative in small frequent doses, as long as the nutrition of the heart muscle is well maintained. Another valuable sedative is antipyrin in doses of one grain every four hours for each year of life, or half a grain if the child is under one year. It rarely causes rash in children, does not produce depression, stops the vomiting, and reduces the frequency of the paroxysms. Tussol, a compound of antipyrin, is given in similar doses. Other sedatives are heroin hydrochloride gr. $\frac{1}{30}$ to twice a day, codeine or morphine gr. $\frac{1}{40}$ in one drachm of syrup of tolu three times a day at one year of age, butyl-chloral hydrate one grain every two to six hours (Eustace Smith), tincture of cannabis indica one to five minims every three hours, bromoform, fluoroform, cocaine, and inhalations of chloroform.

Experience has not proved that bromoform is any

more efficacious than bromide and belladonna. On account of its high specific gravity it is liable to sink to the bottom of the bottle and be given in too large a dose. Several fatal cases have been due to this cause. The dose is from one to four minims three or four times a day, for each year of life. It can be given in pure form from a drop bottle, much the safest plan if there is a reliable nurse; or in emulsion or dissolved in alcohol. One drop of bromoform is soluble in an ounce of water, if five drops of alcohol are added. Poisonous doses produce narcosis, slow breathing, soft and intermittent pulse, an erythematous rash, and diminished corneal reflex. The treatment includes artificial respiration, mustard baths, faradisation, coffee, and alcohol.

A saturated solution of fluoroform in water, that is, 2.0-2.5 per cent. strength, in doses of a drachm to an ounce hourly, is said to reduce the duration of whooping to 6-18 days. For small infants one minim is given after each paroxysm and each dose is increased by one minim daily until 100 minims are taken in 24 hours. It is colourless, odourless, tasteless, apparently harmless, but rather expensive.

Quinine and euquinine are sometimes beneficial in large doses by mouth or rectum; gr. for each month of age under one year and $1\frac{1}{2}$ gr. for each year of age at 6 A.M., 2 P.M., and 10 P.M. Give it in full doses for three days and in half-doses for six days, and drop it gradually. Cocaine has been recommended as a local application to the external auditory meatus and the membrana tympani in 5-10 per cent. strength; as a spray to the fauces; and internally to stop vomiting: but probably grey powder and rhubarb are more effective and less harmful.

On the whole a prolonged experience of these various remedies has led the writer to rely on belladonna, bromides, antipyrin, chloral, and codeine, alone or in various combinations. It is important to remember that if there is much secondary catarrh the drugs and treatment appropriate for bronchitis are beneficial. Alkalies and iodides render the secretions less viscid and more easily got rid of, thus reducing the severity and duration of the paroxysms. Glycerine lozenges, etc., help to relieve the throat irritation.

But the essential point to bear in mind in the treatment of this disease is that two-thirds of the fatal cases are infants under one year of age, and about one-fourth of those under this age who get pertussis die. After the first year the mortality is only about 5 per cent. Constitutional debility, damp and cold weather, digestive troubles and bad hygiene are most dangerous accessories. Protect infants as far as possible from exposure. In estimating the value of treatment, and particularly of drugs, remember that mild cases get well in three or four weeks, even if untreated, and that more prolonged ones depend greatly on climatic conditions and environment, and persistent whooping is partly due to habit. There is no specific at present known, and probably a simple cough mixture, combined with general measures, is the best treatment.

OBSTETRICS.

THE VALUE OF ABDOMINAL PALPATION IN LABOUR.—II.

THE value of abdominal palpation for the diagnosis of positions of the fœtus other than the uncomplicated vertex, breech, or transverse, is not fully realised, and the amount of information to be obtained from it in abnormal cases can only be appreciated by those who constantly practise it. In face presentations, for instance, the signs elicited by abdominal palpation are usually quite diagnostic, and require no confirmation by vaginal touch.

The pelvis is empty at the beginning of labour, or the pelvic brim is only partially filled by the presenting part. This occurs because the face does not sink into the brim before labour begins, as the vertex does. At the same time there will be no difficulty in diagnosing a cephalic lie of the fœtus, because the head can be felt and perhaps moved just at the brim. In favourable cases the chin can be positively felt dipping into the pelvis, whilst the occiput stands out hard and rounded with a distinct groove between it and the fetal back. The spine of the fœtus may be found extended or hyperextended instead of being arched in flexion, and the fetal heart sounds are best heard on the side at which the limbs are felt. This no doubt depends on extension of the fetal spine, which naturally brings the ventral surface of the fœtus nearer to the uterine wall.

It is needless to say that the early recognition of a face presentation may be of the greatest importance, for in the absence of contraction of the pelvis or other obstructing element, early recognition will permit of an attempt to change the presentation into that of the vertex. This cannot be done with much chance of success when the face has already sunk into the pelvic cavity. It is in mento-posterior positions of the face that the child runs the greatest risk from the length of labour and the possibility of non-rotation of the chin, but even in mento-anterior cases the child is much more likely to suffer than in any vertex position.

Contraction of the pelvis, both in major and minor degrees, is often overlooked in primiparæ until labour has been in progress many hours. This is a very serious business for the child, and may be equally so to the mother; yet such an accident cannot happen if a careful examination is made at the beginning of labour. The first point which is usually striking is the prominence of the abdomen combined with tenseness of the abdominal walls. This is especially the case in short women. Next it will be noted that the fetal head if presenting is not engaged, and is movable from side to side above the brim. This point alone in a primipara indicates either an abnormal presentation or something which interferes with the entrance of the head into the brim. Some form of contracted pelvis is by far the commonest cause of such mobility of the head above the brim in a primipara.

In a multipara the head may be movable above the brim on account of a pendulous condition of the

abdomen, but the previous history will then either negative or corroborate the diagnosis of contracted pelvis.

The position of the head in a flat pelvis is often transverse, as the head naturally tries to enter the brim in the widest diameter, and further flexion will usually be incomplete in such a case, so that forehead and occiput will be on the same level. These signs will often indicate a contracted pelvis when it is impossible to make the diagnosis by vaginal examination. In a primipara it may be impossible to reach the promontory of the sacrum except when under chloroform, and yet there may be an appreciable degree of pelvic contraction. Whilst it is usually possible to confirm the diagnosis of a flat pelvis by direct measurement of the diagonal conjugate the differentiation of a generally contracted pelvis is often extremely difficult. The position in which the head attempts to engage will give some indication of this, for in flat pelvis the head engages transversely and a little extended on the fetal trunk, whilst in generally contracted pelvis the head engages in an oblique diameter and in extreme flexion.

It is of some importance to differentiate these two forms of contracted pelvis, because the treatment is essentially different where only minor degrees of contraction are present. In some cases of flat pelvis version gives a distinct advantage if performed at the right time, whilst in generally contracted pelvis it may be accepted as a truism that version is absolutely forbidden, and the forceps will offer the best means of delivery. In major degrees of contraction neither of these methods come into consideration.

Again, if induction of labour is determined upon for a minor degree of contracted pelvis, then abdominal palpation is the only means we have of deciding the exact moment at which labour should be induced. As long as the fetal head can be easily pushed down into the pelvis the pregnancy may be allowed to proceed, and labour should be induced only when the head can be pushed down with difficulty. It has not seldom occurred that labour has been induced too early, and a small puny child, with very little chance of survival, has been born, a result of an easy labour. To instance the discovery of breech presentations, of tumours such as ovarian cysts or uterine fibroids, or of contraction of the pelvis, is to allude to the commoner conditions only which cause abnormal labours.

If possible a breech presentation in a primipara should always be converted into a vertex presentation by external version, and this can best be done at about the end of the seventh month. Later it may be possible, but it can only be very rarely accomplished at the beginning of labour. There are many other conditions which can be elucidated by abdominal palpation; those mentioned have been merely those of the greatest practical importance.

LARYNGOLOGY AND RHINOLOGY.

NASO-PHARYNGEAL GROWTHS.

TRUE tumours, under which heading adenoid vegetations are not included, are somewhat uncommon in the region of the naso-pharynx, but they nevertheless occur with more frequency than is generally realised; for they undoubtedly often escape recognition unless a posterior rhinoscopic examination is made whenever there are symptoms of nasal obstruction or catarrh. Several varieties of "naso-pharyngeal polypus" are to be distinguished.

In cases of ordinary nasal *mucous polypus* it is by no means uncommon to find masses of these growths extending into, or even completely filling, the naso-pharynx; sometimes the formation of these polypi is confined to the regions of the posterior ethmoidal cells and sphenoidal sinuses, and little or nothing of them can be seen by examination of the anterior nares. They do not, however, arise in the naso-pharynx, but always have their attachments within the nose, and protrude backwards into the naso-pharyngeal cavity. Their causation, pathology, and treatment are the same as that of the ordinary nasal polypi. They are often associated with disease of the posterior accessory sinuses, are extremely difficult to snare, and are generally best treated by thorough curettage under a general anæsthetic. Hence the naso-pharynx should be examined with the rhinoscopic mirror in all cases of nasal polypi before removal with the snare; for, if it is afterwards found necessary to give a general anæsthetic to remove the masses in the naso-pharynx, the patient will not be grateful for the discomfort already inflicted. With large masses of polypi in the naso-pharynx are better removed, both anterior and posterior, all at one sitting under anæsthesia.

Another form of mucous polypus in the naso-pharynx is of interest, though seldom dwelt upon in text-books. It is indistinguishable in appearance from the usual nasal polypus, but occurs without any association with polypi within the nares. It is a single unilateral growth which hangs backwards into the naso-pharynx from a long pedicle attached within the nares. It is found in young people between 15 and 25, and far more commonly in the female sex. It is said by Killian, and his opinion is supported, that the pedicle is attached to the mucous membrane of the maxillary antrum just within the ostium, and that it passes into the nares through this or through the accessory ostium, which frequently exists further back above the middle turbinal body. It should be removed by traction so as to draw away the pedicle, and this is easily done by means of polypus forceps guided by the finger in the naso-pharynx. There is no marked tendency to recurrence. There is generally no sign of antral disease, and certainly no antral suppuration, in these cases. These single polypi occasionally reach a very large size and completely fill and, as it were, form a cast of, the nares and naso-pharynx.

Fibromata, which are those generally described in the surgical text-books under the name of "naso-pharyngeal polypus," are far more formidable.

They, also, are almost invariably found between the ages of 15 and 25, but nearly exclusively in males. They do not merely project into the naso-pharynx, but grow from its roof. They are not truly malignant, for they do not produce metastases or infect glands, but they show a marked tendency to recur locally. They are vascular, bleed readily, and often profusely. They are composed of fibrous tissue, varying from well-formed fibres to young spindle-cells which imitate the appearance of sarcoma; the more the tumour approaches the spindle-cell type, the more rapid is its growth and the greater the tendency to hæmorrhage and to recurrence after removal. This latter also depends very largely on the breadth of its attachment, which may be sessile or by a fine pedicle. The method of removal must also depend on the attachment, which should be carefully examined with the finger before any operation is undertaken. When the pedicle is quite thin, the growth may be easily removed with forceps or cold snare; but if it be thicker severe bleeding must be anticipated and the galvanocautery snare should be employed. When there is a broad attachment removal is very difficult, and recurrence is probable; it is usually best, after preliminary laryngotomy, to split the soft palate and cut away the hard palate until the base of the tumour is thoroughly exposed from the mouth and to remove it by chiselling away the bone to which it is attached, finally uniting the divided soft tissues of the palate.

Among *Malignant Growths* sarcoma is extremely rare, unless the more sessile and rapidly growing fibromata be considered as such. Epithelioma, however, is not very uncommon, though often undetected until it is far advanced and involves the cervical glands. In every case of apparently malignant glands without obvious cause the naso-pharynx should always be examined for the primary growth. As this part is not greatly concerned in deglutition, pain is absent or very slight until the later stages. The first complaint is often deafness, owing to obstruction of the eustachian tubes. Rhinoscopic examination discloses an irregular lobulated mass, and the characteristic hardness of the growth can be made out on palpation. These growths frequently remain undiscovered until the secondary glandular involvement has progressed so far as to contraindicate operation; but if they are diagnosed before this has occurred removal may be attempted with some prospect of success. The operation may be performed through the mouth after splitting the palate, as described above for the removal of fibromata, and this method gives a remarkably good view of the part; but if the growth has penetrated into the nasal cavity it can only be thoroughly extirpated after partial excision of the upper jaw. In some cases an osteoplastic resection of the jaw may be recommended, the bone being restored to its position at the end of the operation. A preliminary laryngotomy should always be performed, and the pharynx plugged to prevent the entrance of blood into the lungs.

DERMATOLOGY.

GIEMSA'S METHOD OF STAINING THE TREPONEMA PALLIDUM.*

Slow Method.—To secure good preparations it is essential that the smear be carefully made and well fixed before staining. The smear may be made either on a slide or on a cover-glass. A small drop of the clear fluid which exudes after scraping the surface of a chancre should be placed on the slide and spread out in a thin and uniform layer. If there are any solid particles, these may be crushed between two cover-glasses, after moistening with a little normal saline solution. The best method of fixation is by alcohol. After drying the smear in the air the slides or cover-glasses are plunged into a beaker containing alcohol, covered up, and left for half an hour or longer.

The stain is prepared by Grüber under the name, "Giemsa's Solution for Romanowsky Staining." Its exact composition is as follows:

Azur II.—Eosin	3 grammes
Azur II. ... ..	.8 grammes
Glycerine (Merck, chemically pure); and Methylc alcohol (of each) 250 c.c.	

Just before use, 15 drops of this are mixed with 10 c.c. of water in a Petri dish. Into this all preparations are put for several hours. They are then washed in water, dried on filter paper, and mounted in balsam.

Rapid Method.—The smears (as thin as possible) are made on the slide, not on a cover-glass. If

the preparations have been made some little time simple drying in the air is sufficient to fix them; but fresh specimens should be fixed by passing the slide three times through the flame of a spirit lamp or of a half-turned-on Bunsen burner.

Ten drops of the Giemsa stain are put into a test-tube containing 10 c.c. of distilled water, taking care to avoid the slightest trace of acid in the water. To avoid the formation of precipitates the vessels used must be quite clean, and the Giemsa stain must be added to the water drop by drop, while the test-tube is gently shaken. The dilution should be made just before use. The staining powers are intensified by the addition of 5 to 10 drops of a 1-in-1,000 solution of carbonate of soda.

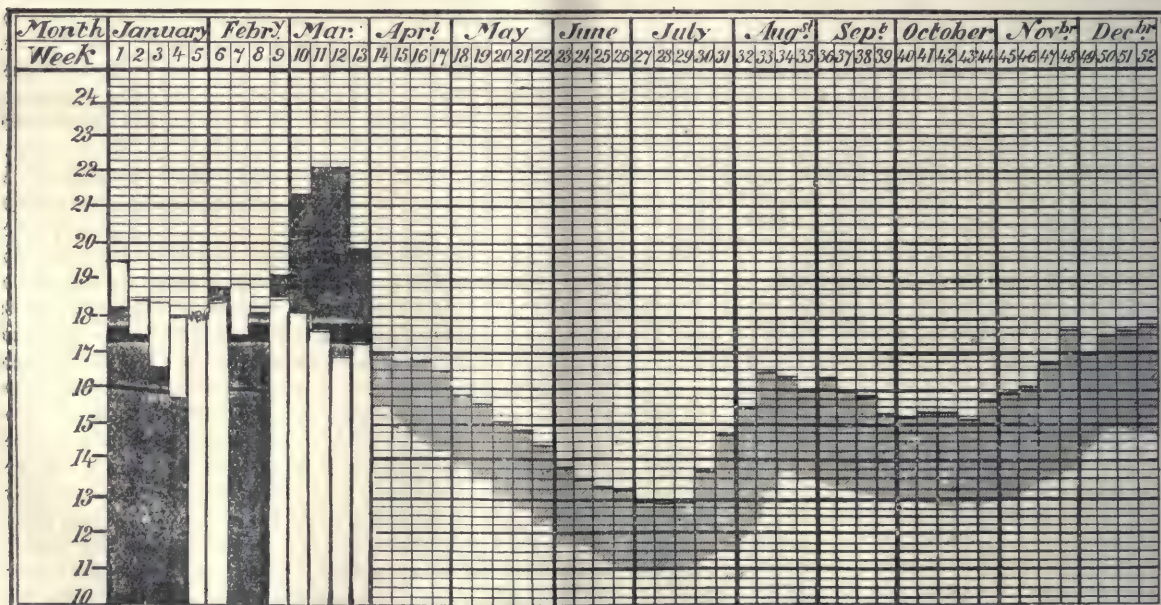
The slide is held in forceps, and a few drops of staining mixture are placed over the smear. It is then gently warmed over the spirit lamp flame for a few seconds, until vapour arises, but short of boiling. The solution is then thrown off; a fresh lot is put on, warmed as before, and thrown off. A third lot is dropped on, and warmed gently for one to two minutes. The slide is then washed in water, dried on filter paper, and mounted in balsam.

The treponema is coloured a reddish violet. The first method is recommended for the study of details of structure of the parasite and its relationship with the cellular elements; the latter for diagnosis.

* From "La Syphilis." Levaditi et Roché. Masson & Cie.

DIAGRAM OF THE WEEKLY DEATH RATE IN 1909.

Showing the weekly death rate for 1909 according to the Registrar-General and the mean weekly death rate for the last seven years of the 76 great towns of England and Wales.



White columns show mean weekly death rate for last seven years. Black columns show weekly death rate for current year. Where death rate for 1909 is in excess of the seven yearly mean, the excess is shown in black above the white column which represents the mean. Where death rate for 1909 is below the seven yearly mean, the black column is shown in its entire length; the white column, which represents the mean, showing above the black. Where the death rate for 1909 coincides with the seven yearly mean, it is shown thus, xx.

THERAPEUTICS AND PHARMACY.

THREE VEGETABLE LAXATIVES FROM TRINIDAD.

THE *Journal of Physiology* for February 1908 contains an interesting account by Mr. J. Theodore Cash of his investigations upon the physiological action of certain seeds that were sent by Mr. J. H. Hart, of the Botanical Department, Trinidad, to Kew Gardens, and placed in Mr. Cash's hands for experimental research at the direction of Sir W. Thiselton-Dyer. The original paper must be consulted for details of the experiments that were made upon animals and man. The results seem likely to be of considerable therapeutical service.

The seeds investigated were of three kinds, namely, those of an Euphorbiaceous plant named *Garcia nutans*, and those of two *Omphaleas*—the *Omphalea triandra*, or Jamaican "cob-nut," and the *Omphalea megacarpa* or *diandra*. In the fresh state these are known in Jamaica to have a laxative action, for which they are sometimes used dietetically.

An oil is obtainable from each of the above varieties of seeds; the actions both of the crude drugs and of the oils were investigated, and Mr. Cash's results are summarised in his paper as follows:

1. The seeds of *Garcia nutans*, *Omphalea triandra*, and *Omphalea diandra* (*megacarpa*) are possessed of purgative properties.

2. The action of the *Omphaleas* (apart from mechanical effect) appears to be entirely due to the presence of a fixed oil, which, though purgative, is bland and unirritating when given in effective doses. The degree of action of the fresh seeds stands in direct relation to their oily contents.

3. The oils show little tendency to vary with time from their original condition and activity.

4. *Garcia nutans* seed, whilst containing a purgative oil, possesses an action in excess of the oily contents. It is probable that another (possibly deleterious) principle is contained in the seed, which may belong to the group of toxalbumoses.

5. The oil rapidly undergoes changes in condition and likewise in activity.

6. *Garcia nutans* and probably also the two *omphalea* seeds increase peristalsis by stimulating the intramural nervous plexus (Auerbach's and Meissner's) of the intestine. The intestinal juice is markedly increased by the first, probably by the others to a much slighter extent. The dose of the oils of the *omphaleas* is sufficient to produce a feeble mechanical action, contributory to the purgative effect which is proper to these oils.

All three seeds produce diuresis, absorption of their principles being thereby indicated. *Garcia nutans* is the most active in this respect; the *omphaleas* less so. This action is not exerted through the blood-pressure, as the *omphaleas* do not affect it, and *garcia nutans* causes no elevation, but the reverse after it has acted for some time; it is presumable that the tissue of the kidney is directly stimulated, but the exact production of this diuretic action is undetermined.

7. As effective non-irritant cathartics the seed of *omphalea triandra* and *omphalea diandra* or their ex-

pressed oils would constitute valuable medicinal agencies. The dose sufficient to prove effective is small in bulk, relatively to castor oil, and the taste is far from unpleasant.

Garcia nutans seed causes a prompt effect of a drastic character when given in large dose, but a simple purgative or laxative effect may be developed by modifying the dosage. The oil may probably be found the better and safer agent in the latter capacities.

Some of Mr. Cash's experiments, particularly those carried out in investigating the effects of the seeds and their oils in man, afford some idea of the doses that might be employed in actual therapeutics in practice.

Six minims (0.4 gram) of the oil obtained from *garcia nutans* seed caused no discomfort, but six hours after ingestion there was a single soft evacuation of the bowels, and there was a similar effect upon the following morning. This dose was repeated on three occasions with very similar results; three times out of four there was some sensation of warmth in the right iliac region between four and five hours after the drug was administered.

Three minim (0.2 gram) doses produced no result on two occasions; on a third there was a single, soft evacuation fifteen and a half hours later. One and a half minim (0.1 gram) doses were invariably without effect. One judges, therefore, that the dose of the drug should be 6 minims or more.

No nausea nor any local irritant action was induced by ingestion of the oil obtained from the *omphalea triandra* seeds. There was, however, a distinct laxative effect, apparently identical with that produced by the fresh seed. No drastic effect was recorded from doses up to 1 drachm (4 c.c.). Some diuresis without vesical irritation also occurred. A slight laxative effect usually, though not quite invariably, followed a dose of 18 minims (1.2 c.c.), a soft evacuation resulting on the following morning. The effective dose appears to be from 30 to 45 minims (2 to 3 c.c.) of the oil.

The action of the oil obtained from *omphalea diandra* seeds is closely similar to that of the fresh seed taken in proportion to its oily contents. The kernel yields 64 per cent. of the oil, so that a dose of $1\frac{1}{2}$ drachm (6 grams) of the former, which is known to be distinctly laxative, would furnish about 1 drachm (3.8 grams) of the latter. From this amount of the oil a fairly parallel action results, though, if anything, the effect is slightly below that of $1\frac{1}{2}$ drachm (6 grams) of fresh seed in activity. This may be due to the fresh seed containing less than the usual percentage of oil, and also to the probability that small but irregular fragments may cause an additional mechanical effect favourable to peristalsis, when the seed has been chewed and swallowed. The oil of *omphalea diandra* is so similar in character as well as in activity to that of *omphalea triandra* that there is a presumption of their being identical. This point is not yet definitely decided.

MOTURING NOTES.

ECONOMY IN MOTOR TYRES.

MESSRS. HARVEY, FROST AND Co., the inventors of the well-known process of tyre repairing, some time ago forwarded me an advance copy of their book, "Economy in Motor Tyres." This has been published with the view of assisting the motorist in his choice of tyres, and to give some hints on their care and treatment. By the co-operation of all the principal tyre companies the author has been able to give a large amount of official information, which I am sure will prove of considerable service to motorists of all classes.

Messrs. Harvey, Frost inform me that they will be pleased to forward a copy of this useful volume post free, to anyone applying for same to their offices at 39 Great Eastern Street, E.C. I would strongly advise readers of this journal to write for a copy of this little book, which contains a vast amount of concise yet comprehensive information. No motorist can afford to remain indifferent to the question of tyre economy. Not only are the tyres the most important and expensive items in the equipment of a car, but their upkeep is of equal importance from a pecuniary standpoint. It is therefore imperative that the car-owner who desires to reduce his expenses to the lowest possible figure should give this matter his closest attention.

THE CHOICE OF TYRES.

With regard to the choice of tyres there are many valuable hints contained in the various lists of the tyre manufacturers, but the difficulty has been that, as in the nature of things the manufacturers are competitive, these hints and details have hitherto been spread over a large number of lists, which have to be gathered together if the motorist wishes to examine the claims and peculiarities of each tyre. And even then he may omit, or be ignorant of, the very list which contains particulars of the tyre which would best suit his purpose. For a long time past some means has been required whereby the whole official and authoritative data could be collected in one publication and presented to the public by a disinterested and impartial method. This object has now been gained by the issue of this book by Messrs. Harvey, Frost.

It requires but a cursory glance at the articles contributed by the various motor-car tyre companies to see that the life of the tyre depends on its care and treatment, and that the manufacturers are unanimous in this respect. The mere fact that the same make of tyres on the same class of car vary in behaviour according to the different drivers in charge proves conclusively that in many instances the drivers are themselves to blame when tyre troubles arise. The manufacturers all emphasise the importance of proper inflation. Pumping too hard increases the wear and lessens the resiliency of the covers, in addition to reducing the

comfort of the occupants of the car. If not hard enough, then the canvas becomes chafed and worn through friction, and the rubber is also more liable to cut near the rims.

Careful driving, at a reasonable speed, the avoidance of sharp turns and of sudden, hard use of the brake unless absolutely necessary, are all points to be observed if the driver desires to treat his tyres well. When in the garage the tyres should be properly protected from contact with oil, grease, and paraffin in any form whatever; kept away from bright sunshine, and not allowed to remain standing in pools and puddles of water. In short, they should be treated in a common-sense manner, and the care expended will be amply repaid by the prolonged life, the decreasing amount of repair bills, and economy in time, temper, and purse.

MAXIMS FOR THE CARE OF TYRES.

The little book I allude to above gives an excellent summary of points to be attended to in regard to tyres, some of which I reproduce here:—

Inspect the tyres after every long run and attend to cuts at once.

Repair them in a proper manner and avoid all makeshift methods.

Fit the heaviest tyres your car can take.

Use the best quality tubes; poor quality is the reverse of economy.

When fitting a tyre or tube don't fail to use sufficient French chalk; a lubricant between cover and tube is absolutely necessary.

Take care that tyres do not stand in oil and grease in the garage.

Don't fail to use protectors for spare tyres carried on the car.

Don't abuse the use of clutch and brake.

Don't forget to carry spare valve parts.

Don't neglect to use a good pressure-gauge.

Don't damage tyres by taking sharp turns.

Don't wait until your tyres are in a bad way; attend to them immediately any signs of damage appear.

Don't use damaged rims, sometimes caused by running on deflated tyres.

The foregoing rules are all most excellent, and, if carefully followed, will undoubtedly considerably lessen the expense of tyre upkeep, nowadays the heaviest item to be considered in regard to motor-car maintenance. Many experienced motorists, however, whilst attending to the other points, habitually neglect the last rule in regard to examining their rims from time to time. This is really necessary, since every rim which is rusted or flattened soon produces cuts round the beads of the cover. The French for "bead" is *talon* or "heel," and as Achilles, though otherwise invulnerable, was killed through a wound in the heel, so many a cover has been done to death by a wound in the bead.

"VIATOR."

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

THE NEW OUT-PATIENT DEPARTMENT OF ST. BARTHOLOMEW'S HOSPITAL.

DESCRIPTION OF THE BUILDINGS.

WE publish this week plans of this important addition to the oldest hospital in London, which was formally opened by the Prince of Wales in July 1907 and is now in full occupation. The new buildings are entered from Giltspur Street

passing the porter's lodge is the entrance for accidents. A large ante-room and two rooms of unequal size are devoted to the reception of accident and emergency cases. At the further end of the courtyard is a porch which gives access by

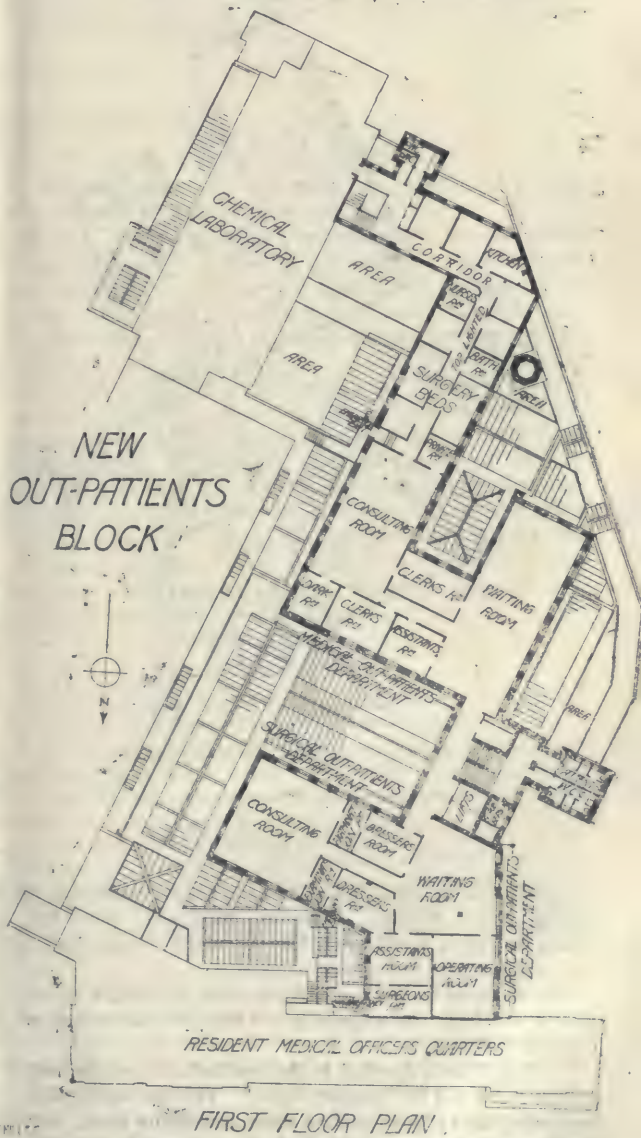
ST BARTHOLOMEW'S HOSPITAL LONDON

SCALE OF FEET.



ST BARTHOLOMEW'S HOSPITAL, LONDON

SCALE OF FEET.



and adjoin on the south the new Post Office extensions on the site of Christ's Hospital. On the north they adjoin other buildings of the hospital. A carriage entrance with footway at one side gives access for out-patients and casualties alike to an enclosed courtyard. Immediately on the left after

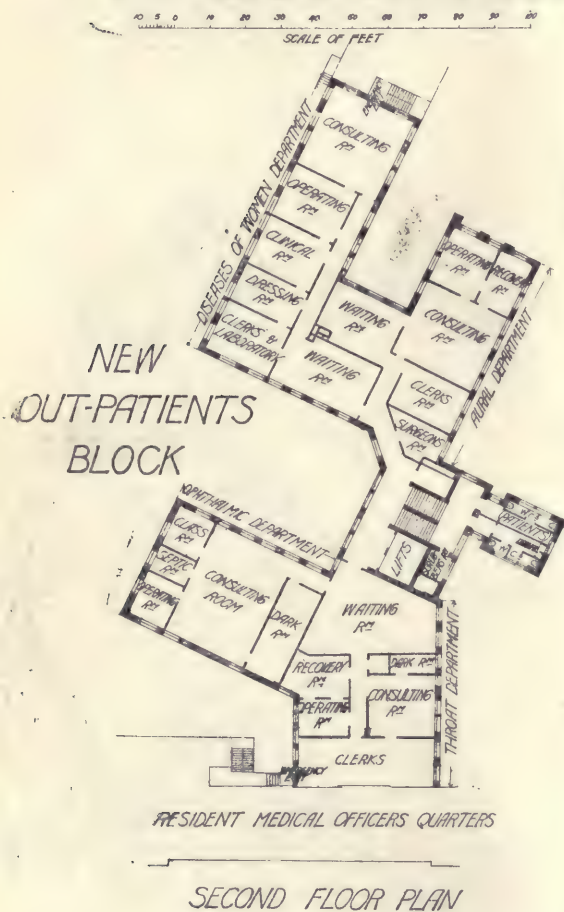
two separate entrances, for men and women respectively, to a large waiting hall capable of seating upwards of 800 people. On all sides of this hall are the medical and surgical consulting rooms for casualties; besides these rooms there are two small operation rooms and two rooms for nurses.

A passage at the back of the larger range of consulting rooms leads to the dispensary waiting hall, where patients are served with medicines, etc., at seven different windows, each bearing a notice stating the class of patients to be served, and there is a window reserved for urgent cases. In this hall is a small enclosed counter for the sale of bottles and other things which patients are expected to provide themselves. On leaving the dispensary patients reach the exit doorway by a separate passage, and thus all possibility of crossing other patients is avoided. The magnitude of the work carried out in this department may be gauged by the fact that during one day as many as 1,470 patients have been served. In proximity to this department is a set of

a "cut-off" lobby are two closets for women and two closets and a urinal for men; also an orderly room for scrubbers. These offices are repeated on each upper floor. The surgery wards are eight in number, accommodating ten patients, and have attached a bathroom, kitchen, and nurses' room, with w.c. and sink room in a small tower with "cut-off" lobby.

The second floor is devoted to special departments. The department for diseases of women consists of a waiting room, consulting room, operation room, clinical room, dressing room, and laboratory. For the aural department there is a waiting room, surgeon's room, consulting room, operating room, recovery room, and clerks' room. The

ST BARTHOLOMEWS HOSPITAL LONDON



rooms for the out-patient and casualty sister, consisting of sitting room, kitchen, bedroom, bathroom, and w.c. There is also a small room for the night dresser and a w.c. and lavatory for nurses.

The staircase to the upper floors is in the centre of one side of the hall, and adjoining are two lifts for infirm or crippled patients.

The first floor is devoted to the medical and surgical out-patient work and to "surgery beds." The medical department comprises a large waiting room, consulting room, with small examining room attached, two rooms for clinical clerks, an assistant's room, and a dark room. On the surgical side is a waiting room, consulting room with two examination rooms, two rooms for dressers, an operation room with assistants' and surgeon's rooms attached. On the half landing of the staircase in a projecting tower with

ST BARTHOLOMEWS HOSPITAL LONDON



ophthalmic and throat departments are provided with a common waiting room. The ophthalmic department comprises a large consulting room, a small operation room, a room for septic cases, a spectacle room, and a dark room for ophthalmoscope work. For the throat department there is a consulting room, operation room, and recovery room, a room for clerks, and a dark room.

The third floor contains the departments for orthopaedic work, electrical treatment, diseases of the skin, and dentistry.

The orthopaedic department occupies the wing which on the floor below contains the department for diseases of women. It contains a waiting room, consulting room, operation room, instrument room, surgeon's room, room for physical exercise, plaster room, and a small room for seeing old cases.

The electrical department comprises a waiting room, two rooms for general treatment, testing room, bathroom, x-ray room with dark room attached, and a developing room with switch room attached.

The skin and dental departments are linked with a common waiting room. The skin department consists of a consulting room, with two clerks' rooms, one for male, the other for female patients, a room for the chief assistant, a room for treatment, and one for x-ray work. For the dental surgeon is provided a large surgery, a room for operations under gas, and two recovery rooms, and two small preparation rooms.

On the floor above is the clinical lecture theatre.

From a bare description of the accommodation it is difficult to realise the excellent way in which the problem set before the architect, Mr. E. B. P'Anson, has been dealt with. To contrive all these various departments, with their varying and, sometimes one would think, conflicting requirements, was no easy task; and it must be admitted that

Mr. P'Anson has succeeded in producing a building that calls for little or no criticism. The lighting in particular of every room is excellent; whether the ventilation is equally efficient time alone will show. As regards the finishings, glazed tiles have been largely used on the walls, and the effect of the colour scheme is pleasant and at the same time appropriate to its purpose. There is no indication anywhere of extravagant outlay, while appearance has certainly not been neglected.

The large waiting hall on the ground floor is warmed and ventilated by a modification of the Plenum system, fans being provided for extraction; the remainder of the rooms are warmed by hot water ventilating radiators, and provided with extraction shafts fitted with electric fans, but ventilation by open windows is also available.

In addition to the extension described above there is a block containing rooms for the resident staff, facing Giltspur Street, and over the dispensary on the first floor a set of chemical laboratories, and on the floor above a complete new kitchen department.

A VISIT TO A SWISS HOSPITAL.

BY CONRAD W. THIES, Secretary to the Royal Free Hospital, Gray's Inn Road, London.

THE Insel Hospital at Berne is beautifully situated on the outskirts of the city, on rising ground sloping to the south-east and commanding magnificent views of the snow-capped mountains of the Bernese Oberland. It is built on the pavilion system, the various buildings being connected by uncovered asphalted paths, which are interspersed with lawns, flower beds, and shrubberies. The whole of the buildings are heated and ventilated by an elaborate hot-air system, which is somewhat allied to what is known in this country as the "plenum system." The air, after being filtered, is conveyed from the boiler-house through underground conduits and pipes to the various parts of the institution. The vitiated air is sucked out by means of fans and carried back to the flue of the boiler-house chimney.

There is nothing very special to remark respecting the general equipment of the wards and various departments, which are mainly on the lines of the modern German hospitals. The provision made for skin diseases is very complete, for such complaints are somewhat common in the canton of Berne. The hospital is a combination of two old institutions—namely, the Insel (or Island) Hospital, with 260 beds, and the "Outer Hospital" for incurable cases, with 120 beds, of which twenty are reserved for children. These two institutions now form one Corporation, which is recognised by the State and, under the general inspection of the Government, administers their affairs and is empowered to acquire property.

Both the hospitals are available for the purposes of medical education, and it is specially provided in the regulations that "They are to keep pace with the ever-growing needs of science." Applications for admission must be made upon a special form, which is provided by the hospital. This form demands much detailed information as to the means and circumstances of the applicant for treatment, and it must be verified by the Mayor or Magistrate of the district where the patient lives.

In all cases the poor citizens of Berne have the first claim for admission, then the poorest of the applicants from the neighbouring villages. The Directors decide in each case whether the patient shall be admitted free or what payment shall be paid. In many instances the payment is made by the Canton, when the patient is too poor to make any payment. The payments demanded vary according to the means of the patients, and range from 1 to 15 francs per day. The rest of the cost of maintaining the hospital is provided

by subsidies from the State and Commune, and by the benefactions of private individuals.

During the middle ages pious bequests for charitable purposes were very common in Switzerland; these bequests were, however, mostly devoted to religious purposes, such as the building and endowment of churches and convents, also for the maintenance of masses for the dead and special services. The "Insel Hospital" owes its foundation to the benefactions of Anna Seiler, who lived in the fourteenth century. The Mayor and Council of Berne accepted the bequest of Anna Seiler and loyally carried out her wishes. They executed a reciprocal deed of trust and thereby declared that they would take charge and look after the hospital and adhere to the instructions and conditions made by the foundress. From that day to the present the authorities of Berne have continued to superintend the hospital, which is still one of the best-equipped and managed hospitals in Switzerland.

A QUIANT WILL.

The following is a literal translation of the wording of the original Deed of Trust of the above Hospital:—

"In the name of God Amen, I Anna Seiler, Citizeness of and dwelling in Berne, now in good health and of clear mind and with the advice and permission of the Mayor and of the Council and of the Two Hundred of Berne, for the benefit of my soul and of the souls of all my ancestors and of all believers, for the curing and comforting continually and for ever of the Town and Citizens of Berne and to perform the works of mercy, viz.: (1) to feed the hungry, (2) to give drink to the thirsty, (3) to shelter the stranger, (4) to clothe the naked, (5) to tend the sick, (6) to comfort the prisoners, (7) to bury the dead. In order that this may be accomplished have arranged founded and made by the hand of Nicholas of Muleron Citizen of Berne, my Executor, a perpetual Hospital, wherein shall be for ever 13 Bedridden and indigent persons and 3 other reputable persons, who are also themselves needy to nurse and serve the bedridden ones, and if the needy ones or the persons at any time go away so shall always be chosen another needy and bedridden or a person of this town in the place of those gone away.

"I also appoint order and make with these deeds and with the hand of the aforesaid Executor that after my death the Mayor the Council and the 200 of Berne and their successors and no one else shall establish the aforesaid Hospital and provide same with Governors and with other things whatever is necessary for it as they then think."

NEWS AND COMING EVENTS.

THE Right Hon. Lord Viscount Duncannon has promised to preside at the festival dinner in aid of the funds of the Metropolitan Hospital at the Whitehall Rooms on May 20 next.

COLONEL ARTHUR SALTMARSH, of Sevenoaks and Bournemouth, who died on March 11, left £500 to Gravesend Hospital and £500 to Guy's Hospital. Mrs. Esther Tate, of Princes Street, W., who died on March 11, left £1,000 to Middlesex Hospital.

MISS JUDITH HENDERSON, of Chester, left £600 to the Children's Convalescent Home, West Kirby, for the permanent endowment of a cot, and £500 to the Birkenhead and Wirral Children's Hospital, also for the endowment of a cot.

THE HON. HARRIET MARIA GEORGIANA LE POER TRENCH, who left estate valued at £122,769, bequeathed the net proceeds of the sale of her large diamond tiara and other valuable personal articles to the Hospital of St. Elizabeth of Hungary, Grove End Road, St. John's Wood, N.W., and on the falling in of certain annuities the capital of these is to be paid to this hospital, the testatrix's intention being that the bequest to the hospital shall amount to £10,000 from this source. She also left £100 each to the London Mendicity Society and nine other charitable institutions.

At a special meeting of the members of the Cheshire Milk Producers' Association the following resolution was carried unanimously:—"That in view of the serious loss to stock-owners and to the nation resulting from bovine tuberculosis, this meeting is of opinion that the time has arrived when the question of a national scheme subsidised by Government for the insurance and subsequent elimination of all clinically diseased animals should receive the earnest consideration of the agricultural community and the Government."

MAJOR F. J. W. PORTER, R.A.M.C., appeals for funds in aid of the Princess Christian Mission Hospital at Sierra Leone, which was totally destroyed by fire on March 17. Though, thanks to the coolness and heroism of Miss MacPherson, one of the nursing sisters, no lives were lost, both the European and native sisters had the whole of their effects destroyed. The damage is partly covered by insurance, but money is immediately required to make it possible to carry on in a temporary building the excellent work which has hitherto been done by this hospital. It is also very desirable to reconstruct the building of stone, in order to minimise future risk of fire, and to build it on modern principles. Subscriptions may be sent to Mr. F. Fishwick, honorary treasurer, Sierra Leone Diocesan Fund, 20 Harold Road, Upper Norwood, S.E.

CANON ERSKINE CLARKE presided at the annual meeting of the governors of the Bolingbroke Hospital recently. In moving the adoption of the report he drew attention to the need for more subscriptions. Those for the year amounted to about £526. The cost of maintaining the accident branch of the hospital was £2,000 per annum. Donations and legacies had enabled all liabilities to be met, but the future was somewhat problematical. In seconding the adoption of the report, Dr. Howell said it was difficult to understand why the Wandsworth Borough Council (of which he is a member) should oppose the application of the Weir Bequest funds to the Bolingbroke Hospital. The number of cases from the Borough of Wandsworth treated at the hospital during the year was greater than that of those from Battersea.

MR. LYTTON P. MITTLAND, M.B., B.S. (Lond.), has been appointed Medical Registrar to Charing Cross Hospital.

DR. THOMAS CRAIG STEVENSON, medical officer of the Education Committee of the Somerset County Council, has been appointed Superintendent of Statistics of the General Register Office, Somerset House.

THE Therapeutical and Pharmacological Section of the Royal Society of Medicine will meet at 20 Hanover Square, W., on Tuesday, May 4, at 4.30 p.m., when Dr. Hale White and Dr. Eyre will open a discussion on the subject of "Vaccine Treatment."

THE British Balneological and Climatological Society will hold its annual provincial meeting this year at Torquay; the date being fixed for Saturday, May 8. As in previous years, arrangements are being made for the comfort and enjoyment of members attending the Conference.

LORD SANDHURST, treasurer of St. Bartholomew's Hospital, has received from Mr. Henry T. Butlin, D.C.L., F.R.C.S., consulting surgeon to the hospital, £100 towards the pathological block, being a third donation of that amount to the rebuilding fund of the hospital.

At a provincial sessional meeting of the Royal Sanitary Institute, which will be held at the University of Birmingham on Saturday, May 8, a discussion on Tuberculosis and the Milk Supply will be opened at 11 a.m. by Mr. J. Malcolm, F.R.C.V.S., Veterinary Superintendent to the Birmingham Corporation.

AN appeal is made by the editor of the *Poultry World* for 20,000 new-laid eggs for distribution among the London hospitals. Working in conjunction with the Hospital Saturday Fund, he has arranged to receive at the offices of the *Poultry World* any contributions that may be made by poultry-keepers between May 17 and May 22. The eggs should be carefully packed and the carriage should be paid to the offices of the journal, at 154 Fleet Street, London, E.C. As the packages will be sent direct to the hospitals without being opened, it is requested that covering letters should be sent separately. No eggs should be sent before May 17.

At the annual meeting of the Metropolitan Provident Medical Association, held at the offices, Lamb's Conduit Street, the report of the Council, which was adopted, showed that despite generally unfavourable conditions, the past year was on the whole satisfactory. The twenty branches—sixteen dispensaries and four medical clubs—have now a membership roll of 12,040 cards, family and single. The receipts from members were £5,197 18s. 3d. The medical officers received £3,314 16s. 6d., making, with the sum expended on dispensaries and drugs, a total of £4,946 15s. 3d. devoted to the medical part of the work, or 89 per cent. of the income. The Council call special attention to the action taken by the Education Committee of the London County Council with regard to the medical treatment of school children; and also to the Poor Law Commission's Report. The Council maintains that unless the dispensaries are prepared to make some modification of their present rules to meet the needs of the 750,000 children of school age, school clinics under the immediate management of the local education authority must sooner or later be established. This prospect they view with great misgiving, and they feel that it is their duty to make every effort to prevent a further relaxation of the sense of parental responsibility.

NURSING ADMINISTRATION.

UNBUSINESSLIKE NURSES.

THE accounts which have been coming in relating to the working of the Midwives Act throw a good deal of light on the habits of nurses in respect of notification. The process of conforming to the law in the case of midwives is a dual one. They must first be registered once for all by the Central Midwives Board; they must next notify the local supervising authority of their intention to practise as midwives, and this is a form which has to be gone through every year. Now, although every woman in *bona fide* practice as a midwife was for some years admitted to the Roll of Midwives without examination, a very large number of practising midwives neglected even the simple formality of getting their name inscribed. They ignored the provisions of the Act altogether, and have gone on practising ever since as though it had never been framed. It is quite impossible to estimate the number of these uncertified women, but if all were included who take occasional cases it is probable that the number would run into some thousands. Another large class of midwives take the initial step, inscribe their names on the roll, and omit to notify to the supervising authority. These women are almost as much outside the reach of the Act as the others. They hinder its proper working, and in spite of all the efforts of hardworking inspectors, their work remains uninspected, and is only brought into prominence in the event of an inquest. The report of the Central Midwives Board states "it does not seem extravagant to estimate that the number of certified midwives in practice at the present time cannot fall far short of 15,000." Of these, during 1907, only 12,964 had given the required notice to the supervising authorities of their intention to practise. In other words, a seventh part of the whole body of certified midwives had omitted to take the trouble to fill in a form of notification and pay the required fee of 2s. 6d., for the purpose of making their position legally secure. In particular counties the proportion of the unnotified is far higher; as, for instance, in Middlesex, where it is stated there are 299 notified midwives and 469 midwives who have not notified. In the face of these facts what probability is there of bringing all the trained nurses in the country into line as members of a recognised body, duly inscribed in a central roll, with their names duly verified year by year? The Central Midwives Board has the following aids towards securing registration and notification:—

1. A heavy penalty is attached to failure on the part of the midwife to register or notify.

2. Any birth at which she officiates must be duly registered by an independent authority.

3. Her duties are performed under rules which render it necessary for medical aid to be summoned under various well-defined conditions, and it is therefore easily possible to place the midwife under inspection.

4. The registration and notification fees are low.

5. The number of midwives in the kingdom is comparatively small, and their qualifications are confined to one special branch of knowledge.

If under these comparatively easy conditions it has hitherto been impracticable to ensure complete registration and notification, how will any Nursing Registration Board cope with a problem in every particular more complex?

1. There will be no penalties for nurses who do not register or notify.

2. The ordinary duties of a nurse are performed in strict privacy.

3. No inspection is possible, because the inspector cannot penetrate to the bedside of the nurse's patients, nor can the nurse be compelled to summon medical aid under special conditions, except in the case of infectious disease.

4. The fee suggested for registration and notification is largely in excess of that required from midwives.

5. The vast numbers and variety in qualification of trained nurses introduce features of special difficulty in the task of keeping them in touch with a supervising authority.

The controversies surrounding the question of registration are slowly shifting from the question, "Shall nurses be registered?" to the more complex problem, "How shall nurses be registered?" This being the case, it is all important that one great factor in the whole matter, the unbusinesslike qualities of nurses, shall be allowed full weight. Medical men who take up the subject of registration are apt to overlook this exceedingly important aspect of the registration problem. They argue from their own experience. Who ever heard of a doctor in good practice neglecting to secure that his name was on the register? The members of Parliament who throw themselves generously into the cause of nurse registration cannot conceive of a profession containing thousands of women who rather than take the trouble to pay a yearly half-crown, will deprive themselves of the right to a State qualification. But matrons who have daily evidence of the casual ways of the most highly-skilled nurses in things which belong to their interests are not hopeful of united action on the part of the nursing profession unless the act of registration can be settled for the candidate as an integral part of certification by the training school. Unless this is done, unless, as in the recent proposals for a rational system of registration, the examination is held by the various hospitals, and the certificates are sent up for registration to the central body so that no trained nurse is ever allowed to go out into practice unregistered, there must inevitably result two bodies of trained nurses, the one registered and the other unregistered, for the confusion of the public, and the stultification of a costly State system. It will undoubtedly be a great step gained to get all trained nurses entered on a central roll. That they can ever be induced with or without penalties to verify their names every year for the purpose of keeping the roll correctly, is shown by the action of the certified midwives, a large proportion of whom are trained nurses, to be altogether outside the bounds of probability.

THE

GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK ENDING MAY 3 TO MAY 8.
MEDICAL GRADUATES' COLLEGE AND
POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.
May 3, Dr. Willmott Evans, Skin.
At 5.15 p.m.
May 3, Dr. E. Cantley, The Treatment of Broncho-
Pneumonia.
At 4 p.m.
May 4, Sir Wm. Gowers, M.D., Medical.
At 5.15 p.m.
May 4, Dr. George Pernet, Feigned Eruptions.
At 4 p.m.
May 5, Mr. James Cantlie, Surgery.
At 5.15 p.m.
May 5, Mr. Bland-Sutton, The Baneful Effects of
Pregnancy on Uterine Fibroids.
At 4 p.m.
May 6, Sir Jonathan Hutchinson, Surgery.
At 5.15 p.m.
May 6, Dr. G. H. Savage, The Feeble-minded and their
Care.
At 4 p.m.
May 7, Mr. Sydney Stephenson, Eye.

OBITUARY.

THE death is announced of Dr. Robert James Carter, M.D. Lond., M.R.C.S., D.P.H., at St. John's Wood, at the age of 44. Dr. Carter was a physician at the Western Skin Hospital and had been a house-surgeon at the Soho Male Lock Hospital, resident medical officer at the Royal Hospital for Women and Children, clinical assistant at the Evelina Hospital, house surgeon at King's College Hospital, and surgeon to the Clan Line Steamship Company.

THE death is announced from Ceylon of Dr. W. G. Rockwood, who was very generally regarded as the leading practitioner of the island. We learn from the *Times* that he was born at Jaffna in 1843, and was educated in India, receiving his professional training at the Madras Medical College. Thence he returned to Ceylon and entered the Government service, occupying the post of medical officer at Puttalam from 1867 to 1875. He obtained the M.D. degree of the Madras University, passing in the first class with special honours, and receiving exceptional commendation from the Examining Board. Dr. Rockwood held many important medical appointments during his professional career in Ceylon. He was for many years surgeon to the Colombo General Hospital (subsequently being elected consulting surgeon) and lecturer in surgery and midwifery at the Ceylon Medical College. For ten years he was a member of the Ceylon Legislative Council, and was honoured by his colleagues in the island by the presidency of the Ceylon branch of the British Medical Association. He frequently visited Europe, and when in England on leave he obtained the diplomas of M.R.C.S. and M.R.C.P., and in 1902 he represented the local branch of the British Medical Association at the annual meeting at

Manchester. He retired from active work three years ago owing to failing health.

DR. GEORGE ROE CARTER, M.R.C.P.I., medical officer of health of the Penge District Council, died on April 26 at the age of 66 at his residence at Anerley, where for 30 years he had been engaged in an extensive practice. Dr. Carter spent the earlier years of his professional life at St. Lucia, West Indies, where he acted as colonial surgeon and medical officer of health to the island. He was educated throughout at Dublin, and was for a time house surgeon to the Meath Hospital. He was a Fellow of the Royal Society of Medicine (London) and a member of the council of the obstetrical section. He was also a Fellow of the Royal Institute of Public Health and an ex-member of the Councils of the British Gynaecological Society and the Irish Medical Graduates' Association.

EDITOR'S LETTER-BOX.

DEGREES AND DIPLOMAS.

To the Editor of THE HOSPITAL.

SIR,—It is doubtful whether State examinations would have those beneficial results anticipated by the sanguine. At the present time an amount of uniformity is attained by the jurisdiction and inspection of the General Medical Council. If it is thought by this body that the general standard of medical examinations should be raised, it is within its powers to bring about this result, and remedial measures are insured from time to time by resolutions of this body.

I further submit that the competition between universities and universities and corporations and universities at the present day produces well-thought-out courses of study and efficient teaching, and that slight variations in courses of study, etc., tend on comparison to produce alterations towards further efficiency. One question, to my mind, is whether, if the present standard of the London University had been and were maintained as the standard of a university degree all round, it would not have excluded many men of genius from the higher ranks of the medical profession; and whether many men at the present time recognised as persons of light and learning would have ever been able to shine had the said standard been universal (for men without a degree are practically excluded from many posts of honour in the profession). If this is so, is not the present standard unnecessarily severe? A stereotyped State examination, on the other hand, would probably require a very mediocre standard, and the importance attached to such a Government examination would tend to put into the shade all others, and absence of healthy competition would tend to lower rather than raise the standard of medical examination requirements. The Legislature may be useful to remedy defects in existing bodies, but if the Government take upon themselves to conduct examinations, what body is there left to remedy defects in Governmental examinations? Government would become judge in its own cause. But there seems no reason why Londoners should not have an attainable Degree.

Yours faithfully,

FREDERICK W. COLLINGWOOD.

Dewhurst, Acton Hill, W., April 16.

THE HOSPITAL

MAY 1, 1909.

Name
Address

This Coupon must accompany manuscript or contributions intended for THE HOSPITAL.

The Hospital

A JOURNAL OF

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NEW SERIES. No. 114, VOL. V. [No. 1186, VOL. XLVI.]

SATURDAY, MAY 8, 1909.

THE THERAPEUTIC VALUE OF HOPE.

OF the qualities which make for success in the practice of medicine, using the word in its most comprehensive sense, it is recognised that none is more vital than the faculty of inspiring hope. We are ready enough to accept the truism, but in daily life many of us treat it cavalierly, as a pious resolution which it is respectable to profess but tiresome to materialise in conduct. Nevertheless, the practice of optimism is far better able to stand alone than is the pure practice of technical healing. The inveterate optimist whose technical knowledge is minimal will do more good in the world than his professional brother who stultifies an immeasurably superior technical ability by exercising it with an air of gloom.

It is something of a blot upon us that our textbooks of *materia medica*, which dwell lovingly upon pharmacological excitants and depressants, have never a word to say about the somatic influences of the emotions. Yet these agents are unceasingly operative, and may be so potent as to neutralise, to no small extent, the effect of their pharmacological opposites. For example, it needs a larger dose of a narcotic to quiet an individual labouring under intense mental excitement than would suffice for the purpose were he in a state of composure; and a man under circumstances of mental stress can take with impunity a quantity of alcohol which ordinarily would leave him maudlin.

These are common experiences, and the wonder is that the lessons they teach us are not more formally urged. The neglect is probably due to the vagueness of the subject. Medicine, having wallowed for centuries in vagueness and superstition, is naturally shy of risking a repetition of the experience; indeed, until the relations of mind and body are more precisely established, it is likely that she will continue to look askance, in practice if not in theory, upon those who insist upon the importance of the relation, and the necessity for regarding the mind as a potential item of the pharmacopoeia. But the clearing of the ground has begun, for has not Pawlow given us chapter and verse for the psychic secretion of the stomach? We must look to experimental physiology to give us more such demonstrations. Without them prophets may cry that the functions of mind

and body are indissolubly merged, but they will continue, as heretofore, to cry in the wilderness.

The capacity for diffusing hope is not given to all equally. Some are temperamentally so endowed that their gaze falls instinctively upon the brighter elements in any conjunction of circumstances, to the exclusion of the more sombre. This mental equipment evolves the type of medical man commoner on the stage than in real life, yet not entirely fictitious. He strides, beaming, into the sick-room, and, if it is physically possible, slaps the patient on the back. If the back is pre-occupied by pillows or a mattress, he proceeds verbally in the same direction, endeavouring by a gust of jovial talk and banter to dissipate the greyness of atmosphere which so readily envelopes a sick-room. Often enough his robust cheeriness proves infectious, and leaves the patient with a sense of well-being which the cleverest combination of drugs is powerless to impart. But the danger which threatens such a practitioner lies in a lack of intuitive delicacy, of tact. This defect is a common, if not essential, accompaniment of the cheeriness and *bonhomie* which characterise the type whose explosive joviality represents an absolutely natural overflow of animal spirits. For those who command such blessings, in abundance and continually, are proportionately incapacitated from seeing with the peevish eye of an invalid. Thus it happens, on exceptional occasions, that the cheery and good-natured doctor is written down an uncouth and callous boor. For this reason the most uniformly successful disseminator of hope is he who practises optimism not because he is blind to all other considerations, but because contemplation and experience have persuaded him of its remedial power. Such a man, recognising that his demeanour is a therapeutic asset, capable on occasion of transcending the virtues of his strychnia and bromides, will temper his geniality to the humour of the patient, and graduate his doses of it, *secundum artem*. Not infrequently he will find himself called upon to display hopes he does not entertain—a piece of counterfeited which, if effectually disguised, may be a triumph of therapeutics, though a superficial judgment might give it an ugly name.

In the department of prognosis among private

patients the young practitioner will find a special merit attaching to optimism. Most men take with them from the schools the impress of their hospital experience in prognosis—a most fallacious guide, for hospital patients are drawn from the most reduced and least resistant ranks of humanity; they are often worn by hardship and want, or debilitated by excesses, and are always incapable of commanding the ameliorations which the power of the purse places within the reach of the better-to-do. Swayed by their past associations, young men may easily enter practice, convinced that albuminuria in a man past middle age is tantamount to a sentence of death to

be carried into effect in a year or two. They will be lucky if they do not hint their fears, for it is no joke to have to face, over a period of 15 or 20 years, a man whose impending demise one has regretfully predicted. It is said of a prominent member of our profession that the sufferer from heart disease, phthisis, or what not, leaves his consulting-room in a frame of mind approaching exultation that he should have been so particularly favoured as to contract the pleasant malady in question. The faculty thus humorously expressed of promoting good cheer in the hearts of sick men is equally precious to the doctor and the patient, and cannot be too sedulously cultivated.

THE DUNDEE SANATORIUM DIFFICULTY.

THE direct dependence of anti-tuberculosis measures upon economic conditions is well shown by the difference of opinion in connection with the proposed municipal sanatorium for Dundee, which has aroused considerable public feeling in the district. Certainly this community is not a wealthy one; but then the chance has recently been, and is still, open to it of securing an existing sanatorium upon advantageous terms. Moreover, it cannot be said that the need is not urgent, since there are nearly two thousand consumptives in the city, and the general physical condition of its people, as judged by the index of the percentage of rejections in Army recruiting, has repeatedly appeared to be in a deplorable condition. The opponents of the scheme of taking over and municipalising the Sidlaw sanatorium have themselves used the words "valuable gift" in connection with the transaction, and further estimate the value of the property at £10,000. After this, it seems unreasonable to stand out for the endowments of that institution—some £19,000—being handed over to the Town Council in addition to the property. The sanatorium, it appears, contains at the present time forty available beds, and the plan favoured by the Lord Provost and Town Council of Dundee is to raise this number to 150, for forty of which a charge of 10s. a week each is to be made. It is fairly evident, however, both from a circular issued by the Dundee Citizens' Union and from reports in the *Dundee Advertiser* of April 20 of a very lively public meeting convened to consider the question, that in the present state of local opinion the plan stands little chance of being adopted; indeed, the Local Government Board has stated that, in view of numerous important representations against the scheme, it cannot, without further consideration, give its statutory sanction as yet. But if the popular verdict is clear, the same cannot be said of the reasons advanced by the popular spokesmen. To anyone conversant with the anti-tuberculosis campaign their case will appear much overstated. They quote official figures to the effect that there are from 1,500

to 2,000 cases of phthisis in Dundee, and ask whether 150 beds will be enough. Now it is, unfortunately, probable that these will quite suffice for the proportion of cases which present a good prospect of economic cure. The popular leaders doubt whether paying patients will consent to be treated in a charitable institution, forgetting that illness and fear of death have ever a stilling influence on social prejudices, and that sanatorium treatment at 10s. a week is a very good bargain for the phthisical patient—and so on and so on. The real crux of the matter—Is Dundee financially equal to the maintenance of a municipal sanatorium?—can, of course, only be judged of by its inhabitants; but it is not indicative of an unprejudiced and fair outlook that Dr. Sinclair's suggestion of a middle course (municipalising the Sidlaw Sanatorium and working it on its present scale) has received only passing mention and attracted no discussion at all. It is a pity that this, the first endeavour to follow the good example set by Birmingham to British municipal authorities, should have aroused such opposition, especially since the preliminary financial obstacles seem here to have been smoothed away to some extent. But the present deadlock is what must be expected to occur from time to time. The work of science—in this particular case of applied science in the shape of medicine—has in the last few decades revealed new knowledge, new possibilities, unsuspected responsibilities; and society in general, while accepting the pleasant results at the easy price of a little perfunctory praise, shows little inclination to bear its share of the burdens. What experienced and politically unprejudiced sanitarians are openly saying is that economic conditions rather than medical demands will have to be modified if progress is to be maintained. It is not at all certain that this estimate of their own importance is exaggerated; and we still hope that the growing education of the public in medical and hygienic matters will gradually produce that ideal co-operation between the medical profession and the general public to which we have so long and so patiently looked forward.

ANNOTATIONS.

Dichotomy.

ENGLISHMEN have got so much into the habit of regarding the United States of America as the home of all kinds of "graft" and corruption that no one would express great astonishment if it should appear that the prevailing epidemic has affected the morals of the medical profession over there. Whether this is so, or whether our American cousins are more outspoken and less hypocritical than ourselves is difficult to decide; but at least there is much more discussion in the medical press of the United States on these subjects than ever is printed in the United Kingdom. A botanical term has been borrowed to express one form of illicit business—"dichotomy," to wit, which is used as meaning the division of a surgeon's or specialist's fee with the practitioner who recommends him a patient. Now, a secret commission is an immoral thing, however its nature is disguised in lengthy euphemisms: the concealment of the transaction from the patient is the essential element of immorality about it. This practice, the editor of the *Medical Record* (New York) believes, is still the exception, not the rule, in America. But the mere fact that he feels constrained to protest against "dichotomy" being called a custom goes far to prove that it is not so very uncommon. No doubt the explanation is quite correct, that the practice is an attempt to remedy the gross inequality by which an operator who performs in half an hour or an hour some quite easy operation is paid without a murmur a fee such as the physician who watches over a case of typhoid for weeks is lucky indeed to receive. But however true the fact is that inequalities of remuneration for medical services exist, the way to remedy them is emphatically not by any form of secret commission or dichotomy.

Medical Aspects of the Budget.

WE gather from the reports in the newspapers of the Chancellor of the Exchequer's Budget speech that medical men are not to share in the reduction of the new petrol duty allowed to motor omnibus companies, taximeter cabs, and similar users of this spirit for industrial or commercial purposes. Yet the justice of preferential treatment for the medical profession as compared with the generality of motor car owners is tacitly admitted by the proviso that doctors' cars are to pay but half the taxes imposed on cars according to their horse power. Possibly by the time these lines appear in print some effort may have been made to ascertain precisely what the Budget actually does import in connection with the petrol duty, and to persuade the Chancellor to treat the practitioner at least as favourably as the proprietors of taxicabs and brewers' lorries. Another point in which the Budget will interest those members of the profession who dispense their own prescriptions is in regard to the heavy extra duty on spirits, which will inevitably raise the price of tinctures, and other pharmacological preparations involving this men-

struum, and also that of products such as chloroform and ether. As for the latter, the accentuation of the already enormous difference in price between the drugs made from ethyl-alcohol and those from methylated spirit will probably still further diminish the relative popularity of the former, especially as recent improvements in manufacture have made it as impossible to distinguish them from one another chemically, as it already is clinically. As for alcoholic tinctures, the tendency to order watery tinctures, or watery solutions of the active alkaloid whose effect is required, will certainly be accelerated. This of itself will in many cases be no cause for regret, but there are others in which the most thoughtful physicians still believe in the superior virtues of the old-established alcoholic tinctures. Since one avowed object of these Budget proposals is to diminish alcoholic consumption as a luxury and as a vice, it seems not unreasonable that it should be pointed out to Mr. Lloyd George that medicines are neither luxuries nor vehicles for illicit dram-drinking; and that they are as much a necessity for the poor as for the rich. We would appeal, if it is not too late, to some of the medical men in Parliament to put the foregoing considerations before the minister responsible for the Budget of 1909.

Metropolitan Ambulances Bill.

SIR WILLIAM COLLINS on the 27th ultimo introduced into the House of Commons a short bill conferring powers on the London County Council to enable it to provide for London such ambulance service as the Departmental Committee's investigations have shown to be required. In an article published in *THE HOSPITAL* on the 3rd ultimo, page 21, we drew attention to the fact that the Departmental Committee appointed to inquire as to the provision made for dealing with cases of accident and sudden illness occurring in streets and public places within the metropolis was divided in opinion as to the authority in which the management and maintenance of the ambulance system should vest. A majority were in favour of giving power to the Metropolitan Asylums Board, but, as we pointed out at the time, Sir William Collins' protest against this recommendation was wisely made and ought to be generally supported by everybody interested in making London an up-to-date city replete with every modern contrivance for the benefit of its inhabitants. It virtually reproduces the powers sought by the London County Council three years ago, which, after examination by the Police and Sanitary Committee, were passed by the House of Commons but did not pass the Lords. It is far better to have a short act establishing an ambulance service in London and conferring powers on the London County Council, the proper authority, to maintain it efficiently. We therefore are strongly in favour of the bill, and hope that the House of Commons and the House of Lords will permit every facility to be given to expedite its passage during the present session of Parliament. Sir William Collins ought to have the support of all parties in securing this result.

MEDICAL OPINION AND MOVEMENT.

THE pernicious effect upon the Eyes of prolonged work with Artificial Light of too great intensity is discussed in a paper by Dr. Terrien in the *Journal de Médecine Interne*. He finds that the incandescent gas light and the electric light are liable to produce erythropsy, photophobia, and even temporary abolition of vision. These effects he attributes to the action of the ultra-violet rays upon the eye. He divides the different artificial lights into three classes, according to the proportion of ultra-violet rays they transmit. The first class comprises the candle and oil lamp, and are very poor in actinic rays. The second class includes petrol and gas (except with incandescent mantles); and the third class comprises all varieties of incandescent lamps, acetylene, and electric. From a hygienic point of view for the eye the oil lamp is by far the most suitable, but the author thinks that means can be adopted to annul the evil effects of the more modern forms of artificial light. He proposes that the electric bulbs should be tinted a light yellow, and suggests that slightly yellow-tinted glasses mounted in pince-nez or spectacles should also be worn by those who are compelled to do prolonged near work by these artificial lights.

AT the recent meeting of the German Surgical Congress, to which reference has already been made, the Surgery of the Ureters was fully dealt with by Garré, of Bonn, and he discussed the various methods of treating a ureter when divided in the course of an operation for removal of a malignant growth of the uterus and its appendages. In cases of reunion, the chief danger is stenosis, and on this account transverse section or suturing are especially to be avoided. If resection of a portion of the ureter is necessary, it can be stretched to the extent of two or three centimetres, and a few more centimetres are obtainable by disengaging the kidney and lowering it. Near the bladder suturing of the ureter is not possible, and the method of implantation into the bladder wall, as proposed by Novard, is usually resorted to. Failing this there remains the implantation of the ureter into the intestine or the formation of an external fistula. Intestinal implantation involves the danger of renal infection, but this is considerably reduced by making an entero-anastomosis and fixing the ureter into the isolated loop. Attempts have been made to form artificial ureters from pieces of veins, double folds of peritoneum, and caoutchouc tubes. Israel, of Berlin, has succeeded with this last-named device in two cases. One patient continued well for some years, but has since gone to Africa and not been heard of. The second patient, a young boy, remained well for a year, but then developed a pyelonephritis and died. Many other interesting subjects were brought up for discussion, and among them may be also mentioned the treatment of elephantiasis of the limbs by placing threads of silk in the subcutaneous tissue throughout the length of the limb to act in the manner of drain pipes.

Brandt, of Königsberg, reports a case successfully treated by him in this way, but no mention of Mr. Handley's name appears to have been made.

SOME years ago the treatment of Tuberculous Peritonitis by intra-abdominal injections of Oxygen was introduced by Thiriard, and has since been advocated by other authorities. Professor Bainbridge and Dr. Mecker, of New York, have recently adopted the introduction of oxygen into the abdominal cavity after laparotomy. The oxygen must be pure, and is sterilised and heated to a temperature of 32°-38° C. It is introduced by means of a sort of catheter at one end of the wound, after the rest of the incision has been brought together by sutures. After removal of a large tumour or the evacuation of fluid, sufficient gas is introduced so that the abdomen resumes its original size. In other cases the oxygen is allowed to distend the abdomen till the liver dulness has disappeared. The oxygen is absorbed in 24 to 36 hours. The effects of these injections of oxygen were first studied in animals by these authors and also by Professor Burkhardt, of Würzburg. They are said to stimulate respiration, the heart, and intestinal peristalsis. They prevent the formation of adhesions, and they ensure a rapid recovery from the anæsthetic. They produce no ill effects if carried out with care and under moderate pressure. The objects are to combat shock, hæmorrhage, nausea, and post-anæsthetic vomiting; to compensate diminished abdominal pressure after removal of a tumour or fluid; and to prevent adhesions. Altogether 35 cases have been treated in this way with encouraging results. Among them there were three cases of general peritonitis, and all of them recovered.

THE medical treatment of Ulcer of the Stomach was fully discussed at the German Medical Congress, and some divergence of opinion was displayed by those who took part in the debate. Dr. Lenhartz opened the discussion, and gave an exposition of his method of treatment. He advocates a moderate diet for these patients from the first day, even in cases of hæmorrhage, instead of what he calls the inanition cure of Von Leube. Most of these patients have hyperacidity, and proteids tend to neutralise the hydrochloric acid of the stomach. He gives for the first three days two eggs and 200 grammes of milk. On the fourth day he adds sugar; on the sixth, minced meat; and on the following days rice and rusks. He never prescribes purgatives, but he administers a glycerin enema as soon as palpation shows fæcal accumulation in the right iliac fossa. He has treated in this way 295 patients, of whom 262 had suffered a recent severe hæmorrhage with a mortality of 2.3 per cent. On the other hand Von Leube, who also took part in the discussion, allows no food by the mouth for the first few days, but administers nutrient enemata, and then only gives a very sparse diet. He orders Carlsbad water and

hot fomentations to the abdomen to assist the granulations of the ulcer. In cases of hæmorrhage he advises adrenalin, bismuth, and morphia and the local application of ice. Eleven years ago his published statistics were 74 per cent. cures, relief in 22 per cent., and 2.5 per cent. mortality. Since then he has treated 627 cases, of which 90 per cent. were cured, 8.5 per cent. improved, and 1 per cent. received no benefit from the treatment. None of the cases ended fatally. While several taking part in the discussion spoke in favour of one or other of the two methods, others deprecated a too precise and definite line of treatment for all cases.

COENEN, in a review of 35 cases of Supra-condylar Fracture of the Humerus, concludes that the typical form of this lesion, as ordinarily described, is exceedingly rare. He has only recorded one such case, produced by forcible hyper-extension, and is of opinion that it would be well worth while to collect further statistics with regard to the lesion and to revise the nomenclature of humeral fractures. Theoretically, as every student knows, a large number of varieties of fracture in the region of the elbow joint have been described, and while disregarding all lesions which do not affect the humerus itself, it is still clear that the descriptions of so-called purely supra-condylar fractures do not always correspond with the nomenclature assigned to them. In children the supra-condylar fracture must be exceedingly rare; what is usually taken for it is a separation of the condylar epiphysis. Regarding the treatment of the pure variety, as seen in adults, the author protests against the ordinarily described methods which bear the names of Græssner's extension and Hilgenreiner's angular flexion methods. Coenen prefers to treat his cases by means of an ordinary obtuse angled splint, with the arm in full supination. He lays stress on the accurate coaptation of the fragments and reduction of the fracture by traction. For this purpose he anaesthetises his patient, reduces the fracture fully, accurately corrects any angular deviation that may be present, and puts up the arm in his obtuse angled splint. This method gives excellent results.

GANDOLFO, in a recent number of *Il Morgagni*, reports shortly the results obtained by Mercurial Ointments in the treatment of commencing Suppurative Lesions. In England inunction is by no means so generally used as on the Continent, and nowhere, apparently, is this method of treatment more popular than in Italy. That it is a method which often proves most efficacious there can be no question; but it is one, too, that is open to some valid objections. Putting aside entirely, for the moment, the allegation which is sometimes made by English physicians that it is a "filthy" way of giving mercury, there remain the more reasonable objections that it is difficult, when the inunction method is employed, to regulate the dosage, and that the method is not a popular one with patients. This last objection is of some importance, especially in private practice, but it scarcely holds good in the

case of children. In most instances inunctions will be found almost an ideal method for getting children, especially infants, under the influence of mercury. The administration of mercurial salts by mouth very often leads to obstinate gastro-intestinal derangement in the case of infants, although it must be admitted that there is far less tendency towards such derangement when small doses, frequently repeated, of hyd. cum creta are employed than when the other mercurial salts are given alone and treatment is pressed. Subcutaneous injections are certainly not advisable in the case of infants, and in the case of adults they demand more time and are far more troublesome to practitioner and patient alike than the inunction method.

WITH us Mercurial Inunction, when it is used, is largely limited to syphilitic cases, though its value in chronic peritonitis and some other conditions has long been well known. Gandolfo, in the contribution alluded to above, shows its extreme value in cases of pleurisy, and also praises it in other conditions. He has found it useful in glandular lesions of tubercular origin, and states that in many cases a prompt application of mercurial ointment leads to a striking improvement in incipient suppurative lesions, among which he instances phlegmonous conditions generally, appendicitis, and otitis media and mastoiditis. The cases he adduces are, however, too few to warrant the high claims he makes, except in cases of pleurisy and localised abdominal and pelvic lesions of a chronic inflammatory nature. In these the value of mercurial inunction has long been known, but it is worth while from time to time to draw attention to it.

A PLEA for the use of local Infiltration Anæsthesia in Tracheotomy is urgently advanced by Chevalier Jackson in the *Laryngoscope*. General anæsthesia is condemned as highly dangerous, and quite unnecessary if the method of intradermal infiltration of Schleich is used; but the author at the same time does not confirm the idea of Brown-Sequard, that if the first incision be exactly in the middle line it will anaesthetise the deeper tissues. It is pointed out that the preservation of the cough reflex is all important when the trachea is opened; for the deep inspiration which immediately follows may suck blood or pus into the bronchi, and unless at once expelled by coughing septic pneumonia may supervene. Morphine, codeine, and other sedatives are equally objectionable for the same reasons. Deliberate and careful dissection, absolute hæmostasis before opening the trachea, and full asepsis are all insisted on; and it is pointed out that to secure these operation in good time is essential; to stab at the trachea of a cyanosed patient almost *in extremis*, at the bottom of a deep pool of blood, is to run grave risk of damaging other structures, to say nothing of failing to open the trachea. Careful after-treatment is most important, and nurses should be especially trained for this work. Some infection of the wound edges by the tracheal secretions is inevitable, but is seldom troublesome, whereas any failure

in aseptic technique of the operation or dressing may be disastrous. Dr. Jackson makes up his anæsthetic solution with one grain of cocaine hydrochlorate and one drop of carbolic acid to an ounce of sterilised water. To boil a cocaine solution destroys its anæsthetic property.

EKMEKDJIAN has published the results of his researches into the Origin of Hysterical Hemianæsthesia, and the following are his conclusions: (1) Hemianæsthesia can be caused to appear by suggestion, and made to disappear by persuasion, and is thus identical with all the other manifestations of hysteria. (2) The presence of hemianæsthesia in a patient shows that he is pathologically subject to suggestion, and is on this account a hysterical subject, since the characteristic of hysteria is its suggestibility. (3) Its presence does not prove that all the other ailments of the same patient are necessarily of a hysterical nature; these ailments may be of a different nature and merely running their course in a hysterical subject. (4) Suggestion or auto-suggestion is the starting-point of all hemianæsthesia, but it is not always easy to prove their presence, and it is not right therefore to deny their existence. (5) The commonest sources of suggestion are the doctor's leading questions and suggestive procedures when looking for the hemianæsthesia. All questions and manœuvres likely to suggest to the patient the idea of a possible hemianæsthesia must therefore be carefully avoided. (6) Questions as to the degree of sensation produced by the pin-pricks are valueless for diagnosis.

THE Destructive Action of the Toxins of Bacillus Pyocyaneus upon other bacteria is well known. Emmerich and Löw are of opinion that this action is due to a substance of the nature of an enzyme, which they call pyocyanase. The fact that Escherich had used it in cases of cerebro-spinal meningitis stimulated Krausz and Goosz to employ it in gonorrhœal urethritis, with, however, purely negative results. Despite this failure, Emmerich continued to urge its use in diphtheria and gonorrhœa, and further experiments were made by Sellei, who publishes his results in the *Zeitschrift für Urologie*. He took three or four day old cultures of bacillus pyocyaneus on agar, and diluted them with serum. The toxin of bacillus pyocyaneus being an endo-toxin, five days were allowed to elapse before killing the organisms in the emulsion by heat. A pale green liquid was thus obtained, and on mixing this with discharges containing gonococci, it was found impossible to make cultures of the latter. After repeating this experiment several times, Sellei made others with bouillon-cultures of bacillus pyocyaneus. At 60° F. these cultures had no effect on the growth of the gonococcus, whereas at 98° they had a distinct though variable bactericidal influence. As is so often the case, however, the results *in vitro* are not borne out by those obtained in actual practice, the anatomical peculiarities of the urethra preventing the bactericidal substances

coming into sufficiently close quarters with the offending organisms.

ZWEIFEL, in the *Therapeutische Monatshefte*, describes a uterine condition which he terms Septic Constriction of the Uterus. This is a kind of "uterine tetanus," which persists with great violence during parturition, and gives rise to such an energetic gripping of the fœtus or placenta that they are expelled with the greatest difficulty, if at all. The author considers that this complication is much more frequent than is generally admitted, its presence being frequently overlooked, especially in cases of contracted pelvis. When diagnosed its existence is attributed to the premature exhibition of ergot or to intra-uterine injury—e.g. by attempts at version. While admitting the possible influence of ergot and trauma, the author has noted in all cases under his own care, and in which there could be no question of these factors being at work, that the contents of the uterus are macerated and the membranes prematurely ruptured some hours before delivery. The slow and insidious flow of the liquor amnii occurring a long time before normal evacuation of the uterus allows of an ascending infection of the genital tract. The alkaline fluid from the ovum neutralises the acidity of the vaginal secretions, which thus become favourable for the multiplication of germs. Streptococci, staphylococci, bacillus coli, and pyogenic anærobic bacilli have been found in such uteri. To avoid such grave complications in cases in which the amniotic fluid has escaped, the author, while insisting on the necessity for rapid delivery of the fœtus, advises vaginal douches of artificial serum containing .5 per cent. of lactic acid, a solution which corresponds chemically to the non-bactericidal vaginal secretions of pregnant women.

CAUSSADE and Leven have contributed a paper to the Société Médicale des Hôpitaux on the subject of Changes in Body Weight in the course of Jaundice due to retention of bile. Most authors affirm that wasting inevitably follows this type of jaundice because the fat in the food is undigested and unabsorbed. Caussade and Leven, on the contrary, maintain that retention of bile is not in itself sufficient to account for loss of weight in jaundice, since in their clinic at the Hôpital Tenon they have noticed many cases in which the body weight remained stationary, or even increased with careful dieting in bed. The authors give milk in three-hourly feeds of 350 grams, flavoured to taste with tea, coffee, vanilla, or sugar, and given hot or cold as preferred by the patient. If under this system of forced feeding the patient continues to lose weight, they assume that the cause of the icterus is malignant, whereas if the weight remains stationary the obstruction is mechanical merely. This general statement must, of course, be modified in cases in which œdema, ascites, increase in size of the liver, etc., will account for an increase in weight, as also in cases where tuberculosis, diabetes, or other wasting disease can be held responsible for any emaciation.

SPECIAL ARTICLES.

SOME REMARKS ON MENTALLY DEFICIENT CHILDREN.

By ALFRED GREENWOOD, M.D., B.Sc., D.P.H.; Medical Officer of Health, Blackburn; Medical Officer Blackburn Education Authority, etc.

A YOUNG child has aptly been compared to a plant during the processes of growth and development, and it is common knowledge that he, or she, may be affected for weal or woe by good or evil factors which may play important parts during those processes.

The various stages of development from infancy onwards in a normal child are well known. The child's intellect does not grow so quickly as the muscles and power of movement. At the same time the first signs of intellect show very early in babyhood. At first light can be distinguished from darkness, then colour can be appreciated; for instance, red or yellow is chosen in preference to black. Noises attract the baby's attention, and then, later, he can tell the parents' voices from those of strangers. The baby then develops the sense of distance, and soon finds out those things which he can lay hold of within reach and those which he cannot. Form and other properties of objects come later. Then the child begins to understand the meaning of certain words, and by and by tries to imitate these sounds. A fine new field of instruction is then opened up for the child, and the faculty of spontaneous speech is developed.

Thus during the bodily development there is also an increasing development of the brain in a normal child. A child may enter this world deprived of certain centres, or may exhibit signs of arrested development of various centres—i.e. all the faculties may not be equally developed. In very marked cases falling in this group the result is idiocy or imbecility; such children are easy to detect. There is, however, another group of children who occupy various intermediate positions between those who are normal and those who are so far removed from the normal state of mental capacity and development as to be incapable of receiving benefit from special educational measures. According as these children are at the upper or lower end of their own class they present varying degrees of difficulty, from the points of view of diagnosis, treatment, or administration. For example, it is often difficult to decide whether or not certain children are or are not suitable for admission to a special school.

In this paper I shall not refer to physically defective or epileptic children. As is well known, power has been given, in the Defective and Epileptic Children Act of 1899, to a school authority to make such arrangements as are thought fit for ascertaining what children in their district, not being imbecile and not being merely dull or backward, are defective. That is to say, what children, by reason of mental or physical defect, are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of such defect of receiving benefit from instruction in special classes or schools. This Act is therefore a permissive one.

It will be seen from this that, according to the standard adopted in various districts in selecting children for admission to special schools so might the result vary. For example, on the one hand a certain special school might contain a preponderance of children nearer the imbecile state than the dull or backward state. On the other hand, a special school might contain a much larger proportion of children nearer the dull or backward state than the imbecile state. Yet both these schools might contain children in compliance with the Act of Parliament named above. But the results, as shown by educational progress, by the after-history, and by the numbers transferred to the ordinary elementary schools, would be far greater in the second school mentioned than the first one.

The possibility of such an occurrence would seem to indicate the need for an adoption of a uniform standard of mental capacity. This is, however, by no means easy to fix, and the only practical solution of this difficulty, it seems to me at present, is to proceed along certain lines made as definite as it is possible to make them when dealing with the vagaries of the highly organised and complex nervous system. It would also appear desirable that the improvable element should preponderate in these special schools as far as possible. Unless great care is taken, unsuitable children may gain admission.

There is no doubt that heredity plays an important part in the transmission of various peculiarities from parent to offspring. The province of heredity has become so large as to include not only diseases (marked instances of which are rheumatism and gout) but also instincts, sentiments, passions, memory, imaginations, and all manner of peculiarities of form and function. Everyone knows the likeness between many children and their parents in figure, form, gait, manner, and voice. And those who have experience of special schools have often been impressed by the marked lack of mental development in the parents of many of the scholars. Of course, the law of inheritance does not always hold good, and there are many instances of mental deficiency in children in which the cause is obscure.

Perhaps here it may be of interest if I point out a few details which assist members of the medical and teaching professions in selecting such suitable cases. Much useful information can be gained from the general aspect and nutrition of the child, and from the features, gait, and facial expression. The report of the child's teacher at the ordinary elementary school is a valuable help. A reliable family history respecting each child is also a great assistance. Dr. Fletcher Beach has classified the characteristics to be noted in cases of feeble-minded children as physical, mental, and moral. The form or shape of the head is the first physical characteristic mentioned. This may be too small, measuring only 17 or 18 inches in circumference, instead of the normal

measurement, which is about 20 inches. The head in these cases is conical in shape, and the back of the head flattened. The forehead is narrow from side to side, and often recedes, but the features are usually shapely, the eyes large, and the nose aquiline. Many of this class are lively, restless, imitative, and fond of music, but are unable to learn much because they lack power of attention. On the other hand, some children have heads which are too large, and are round, with the largest circumference at the temple. Many of these do not improve much, but are generally good tempered and affectionate. Other children have one side of the head distinctly flattened.

It is important, also, to note the condition of the hard palate, which in the majority of feeble-minded children presents marked differences from that of other children. The deformities noted in feeble-minded children consist mainly in a high, narrow, and V-shaped form. Again, the ears in feeble-minded children may be too long, asymmetrical, or deprived of the lower portion or lobule. The tongue, teeth, and lips may be too large and there may be asymmetry of the limbs. The skin may contain too much fat or it may be dry and rough. The hair is also frequently dry and brittle. The latter condition is probably an indication of the lower vitality which is more prevalent amongst these children than amongst other children. The power of attention varies in many children presented for examination. If it is impossible to fix a child's attention one may generally conclude that satisfactory results are unlikely to be gained at a special school.

The speech is very often defective, and the senses of smell, taste, touch, and hearing are often imperfect. A considerable number of backward children suffer from post-nasal adenoids, enlarged tonsils, and inflammation of the middle ear. These conditions frequently lead to deafness and backwardness, but they are generally capable of remedy, and therefore should be attended to whenever possible.

I will now deal briefly with those children who gain admission to one of these special schools. Owing to the smaller classes, the specially trained and highly qualified teachers necessary, and the greater cost of administration generally, each boy or girl in a special school costs more than those in the ordinary public elementary schools. Naturally the ratepayer will say, "What return will there be for this expenditure?" In answering this question it should be remembered that there can be no immediate return, and that the results appear tardily after long and patient endeavour. Having overcome the objections of the parents (and this is by no means easy, especially in a town where the first special school is commencing), the child begins to receive special tuition. It should be stated here that the scholars of special schools are "not idiots, nor imbeciles, but through some mental defect they are incapable of receiving proper benefit in an ordinary public elementary school." Such terms as "mad school" or "silly school" are, therefore, entirely out of place in reference to these institutions. The kind of work carried out in these schools will be far more appreciated by a few personal visits than by any description. Children who show a special aptitude for a certain subject, as manual work or domestic

work, are encouraged to develop their faculties in those particular directions. As many of these special schools are buildings which have been erected in comparatively recent years, the scholars spend their school lives under excellent hygienic conditions. The well-equipped bathrooms at the Blackburn special school have worked wonders amongst the children. Over 40 boys and girls are bathed weekly, and it is worthy of record that there is not one dirty head in the school. This result has not been achieved, however, without much patient work on the part of the teachers. At first many of the children were afraid of the bath, and had to be coaxed to watch the performance before submitting to the bath themselves. Now it is a punishment for the bath to be withheld. Also, the children are much better able to dress themselves than when they attended this school first. Children who were formerly brought to school have been encouraged to come alone as soon as they knew the route and when it was considered safe. It is important that a spirit of self-reliance and independence should be fostered in the scholars whenever possible.

There is no doubt that many children attending special schools are living under bad home conditions, which militate against the benefit received at school. This is very unfortunate, and I am afraid it can only be remedied by removing these children from their homes altogether. It is, however, not desirable that parental responsibility should be diminished unduly, and parents who do not do their duty when they are able should be punished without any considerations of false sentiment.

Referring now to the results gained from special schools, it has been proved beyond doubt in London and elsewhere that although there have been some failures, the general result has been satisfactory as showing that these children repay the money expended upon them during school life, for without it they would have been unable to help themselves on leaving school. For example, after such training many children have found employment; the girls as general servants, laundresses, dressmakers, etc., and the boys as errand-boys, labourers, vanboys, workshop employees, etc. It is at this stage that the teachers and others interested can do so much good in forming after-care associations, whose objects should be to find employment for children leaving special schools, and exercise a philanthropic supervision over them subsequently.

In addition to these results many children who have received tuition in special schools for varying periods have improved so much that they have been transferred to the public elementary schools, where they have continued to improve. In this connection it should be mentioned that the teachers in the public elementary schools to whom such children are transferred should take a real interest in them, otherwise the efforts of the previous special teaching may be useless.

From the above remarks it will be quite obvious that children are often presented for medical examination with a view to admission to a special school whom it would be useless to send there owing to incapacity for improvement, mentally and morally. It is very important that these children should be taken in

hand, both for their own sakes and for the sake of the community. The question now follows naturally, What should be done with the failures? Although this is a difficult question, it will have to be faced boldly. In brief, my own view is that the remedy can only be found in the direction of compulsory, permanent detention in some institution where the lives of these "failures" may be made as comfortable and harmless as possible, and especially where there can be no opportunity for marriage and propagation of this type. This would seem to be especially desirable in the group of cases known as moral imbeciles, who are often very clever, baffle their guardians, and develop into dangerous criminals.

Respecting the subsequent marriage of the mentally deficient, there appear to be various opinions. Dr. Shuttleworth states in his book on "Mentally Deficient Children" that of nearly a thousand discharged patients who had passed under observation after institution training, only two were known to have married, and that his experience lent no support to the view which is urged as an objection to educating mentally deficient children and fitting them for work in the world, that they would be thereby encouraged to marry, and in consequence there would be a risk of multiplying mental defect in the progeny. It appears to me, however, that the danger of marriage is a real one, and if one remembers the number of

mentally deficient children where heredity has played a part, one must be impressed with the desirability of preventing such a continuance of this type if possible.

Miss Dendy, whose excellent work in Manchester is so well known, has made several suggestions on this point—namely, that the system of teaching in special schools should be made almost entirely a training in manual work, manners, and morals, and that there should be in connection with every special school a residential special school or colony. She recommends that every child should be dealt with by the doctor, not on the ground of its attainments, but on the ground of its mental condition, and that for every child whom the doctor cannot certify, at the age of 13 or 14, that it is a normal child, a place in a residential institution should also be found where it should remain, on a renewable certificate, for life. Miss Dendy states that the plan would not be any extra expense to the community, but that, on the contrary, it would be a saving of expense, as it would cost much less to keep these people this way than in workhouses and gaols. She also suggests that a trade school might very well be the intermediate step between the special school and the colony, as this would give a further opportunity to those children whom the doctor might consider normal, except in the power of acquiring learning.

AN ACTUALISATION OF THE STUDY OF MORBID INHERITANCE.

DESPITE the prominent position in biology earned by British workers little serious attention in this country has been given the subject of hereditary transmission of defect and of proclivity to disease. No doubt there are some good reasons for this. The years since Darwin came to his own have witnessed also great achievements of bacteriology in the revelation, and in many directions in the combating, of hitherto unknown *materies morbi*. It is not strange that a practically minded people should have been much impressed and taken up with the new methods of investigation and their hygienic and therapeutic possibilities. It may be, however, that the present-day conception of medical research has become so much influenced by the great use made in late years of the microscope and of physicists' apparatus generally, that we have come to think more of the photographer's fingers than of the philosopher's brain, forgetting that in science there is nothing common or unclear, and that simple facts requiring for their collection and appreciation rather temperament than technique may build none the less an imposing edifice of knowledge. At first sight data concerning morbid inheritance, as at present ascertainable, seem greatly lacking in that precision necessary to base trustworthy conclusions upon them. As all medical men are aware, diagnosis itself is often far from exact. In only a small proportion of cases may there be opportunity of establishing the nature of the disease by means of purely objective evidence. Even lay statements, with all their glaring imperfections, have to be relied upon largely. Yet, allowing for all this, there may be much of value to be learned, much of a signifi-

cance not to be destroyed by fine-drawn deductions from the results of laboratory experiment. If, to take a simple instance, it be the case (as one observer maintains) that cancer patients give a family history of consumption disproportionately often, then this is a fact worth careful note. It is evident that if a mere counting of heads like this can reveal nothing, there must be plenty of scope in this branch of research for advanced statistical methods; and in this country we are fortunate in possessing in Professor Karl Pearson a mathematician whose methods, a development of those of Laplace and Gauss, are conceded to have broken much fresh ground in the direction of measuring the correlation of organic characters, particularly in connection with the subject of inheritance.

A hearty welcome may therefore be extended to a publication* hailing from the Eugenics laboratory under Professor Pearson's direction, and containing much bibliographical and original research by medical workers on various diseases and abnormalities, especially as in the foreword by Mr. Francis Galton, and in the preface, a non-controversial note is sounded, and the intention repeatedly expressed to draw no premature inferences from the material thus garnered. Save for one small section the work deals exclusively with disease and malformation. Dr. Bulloch extracts from the haystack of modern medical literature such needles as the bibliographies of heredity in diabetes insipidus and chronic hereditary trophœdema. With regard to the first-named

* "The Treasury of Human Inheritance." Parts I. and II. Pp. 38+x., with illustrations. University of London. Francis Galton Laboratory for National Eugenics. (London: Dulau and Co. 1909. Price 14s.)

disease, a point may be mentioned which holds good of several papers in the series. Where heredity is not an invariable characteristic of the affection studied, the cases given should be supplemented, at any rate before conclusions come to be drawn, by others in which no inheritance is observable. Drs. Lewis and Embleton contribute carefully studied memoirs on split-foot, polydactylism, and brachydactylism, illustrated by radiographs and photographs, some of these reproduced from an article by these authors recently appearing in *Biometrika*. There is a good bibliography of the hereditary aspect of deaf-mutism, and Dr. Jobson Horne writes a general account of the disease. Dr. Rivers gives some pedigrees of consumptives, in the case of two of which the distribution of consumption in the family seemed to be roughly parallel with that of ichthyosis. All of the foregoing cases are recorded in detail in the letterpress, and graphically by means of excellently devised charts.

The co-ordination of all this multifarious detail, or rather of such of it as admits of the process, must needs be a task of great difficulty and uncertainty regarding result. It is legitimate, however, to record the impression gained that the study of morbid heredity is probably a much more complicated thing than merely looking for Mendelian characteristics, a subject which attracted much discussion at the recent debate at a meeting of the Royal Society of Medicine. It has been said that in

this country morbid heredity has had little attention, and the same holds good of anywhere except France and perhaps Germany. What little we may guess as to the actual genealogical distribution of disease we owe to writers like Morel, Moreau, Delage, and Féré. And the tenor of their opinion is that disease may descend from generation to generation not *per se*, but in divers forms and manifestations. "Hérédité dissemblable" may be an instance of the superficial generalisation to which French medicine is rather prone, or it may not. The prevalence of the conception of the "degenerate" among followers of some of the writers named may have as little importance as in this country, where Lombroso's ideas are a chopping block for anthropologist, sociologist, and physician alike, might naturally be presumed. But certainly in many of the families recorded in this thesaurus there are more than the one abnormality to be noted. Idiocy, insanity, and blindness are seen among deaf mutes, epilepsy in the subjects of chronic trophodema. The family of Zerah Colburn, the calculating boy, figures amongst those affected with polydactylism. A pedigree of diabetes insipidus shows two individuals with physical abnormalities and two who were idiots. This may show the difficulty of running the measuring rule over such material, but it will also strengthen the hand of the advocate of eugenics against those who in effect maintain that hygiene is the only means of racial improvement.

MEDICINE.

PHANTOM TUMOURS.

SKILFUL palpation of the abdomen requires not only an exact knowledge of the topographical anatomy of the abdominal viscera, of their respective variations in position at different stages of respiration, and of their possible displacements resulting from congenital anomalies or from stretchings of the peritoneal ligaments, but it also requires much personal experience of the varying degrees of rigidity or flaccidity of the muscles of the abdominal wall, of the normal variations in form and consistence that the same organ may exhibit to the palpating hand in different cases, and finally a considerable experience as to which organs can be palpated normally and which can not. Experience alone can enable one to escape the error of sometimes diagnosing as a neoplasm conditions which may be produced in normal or almost normal organs partly by alterations in their proper position and partly by transient, or, at any rate, unimportant changes in their shape or consistence. The weighty question of the sources of error in abdominal palpation is apt to receive too little attention in text-books.

Abdominal tumours may be simulated by the following conditions:—

(1) By abnormal rigidity or tension of the abdominal wall, particularly if only parts of the musculature are involved at a time; (2) by the great omentum; (3) by alterations in the positions of viscera; (4) by undue distension or by abnormality in the contents of the hollow organs; (5) by alterations in

the form and condition of the stomach or intestines due to spastic contractions.

It is scarcely necessary to enter into great detail upon the question of mistaking swellings of the abdominal musculature for intra-abdominal tumours; one would like, however, to lay stress upon the lineæ inscriptiones tendineæ of the rectus abdominis muscles, which divide the latter up, as it were, into separate compartments, the portion contained in any one of which may be contracted, when the rest is flaccid, whereby even the most experienced observer may be misled into diagnosing a deep-seated neoplasm or inflammatory mass when there is none. The mistake is particularly liable to occur in nervous patients, especially in women, in whom pregnancy may thus be simulated to a degree of exactness that is surprising. In all such cases much assistance may be gained from getting the patient to cough, whilst the palpating hand notes what happens to the apparent tumour both during and after the effort. Sometimes in the case of a muscular lump it becomes more marked on coughing, whereas an intra-abdominal mass would cease to be palpable when the superficial muscles were strongly contracted. In some cases the only way to be sure is to give a general anæsthetic and then palpate the abdomen when the muscles are thus artificially relaxed.

The kind of condition in which the omentum gives the impression of a tumour to the palpating hand is

when parts of it, or the whole of it, have become puckered together, or rolled up in such a way as to simulate either the lower margin of an enlarged liver or else an intra-abdominal malignant tumour. This may result from fibrotic contractions after or during tuberculous peritonitis, or as the result of a former laparotomy. As an instance of the latter may be mentioned the case of a woman of 45 who had had the operation of ventro-fixation of the uterus 12 years before. She had now been suffering for some time past from constant pains in the lower and right side of her abdomen. On deep palpation in this region a distinct tumour could be felt, which was hard, slightly tender to pressure, and but little movable. It seemed to be about the size of the fist. There being some anæmia and loss of weight at the same time, the lump was thought to be malignant, though what the primary site could be was in doubt. An operation having been decided upon and performed, a large portion of the great omentum was found to be rolled up in a most remarkable way into a kind of ball which in turn was firmly united to the parietal peritoneum.

In regard to the third source of errors—congenital and acquired changes in the shape and position of normal organs—the most important examples practically are movable kidney, floating kidney, displaced liver, tight-lacing liver, Riedel's lobe, and wandering spleen. It is not very uncommon to meet with a portion of a "tight-lacing" liver as a freely movable tumour in the abdominal cavity, connected with the main liver merely by a thin bridge of atrophied liver substance or even only fibrous tissue (Riedel's lobe); sometimes this thin connecting band is overlain by bowel, so that one's hand cannot make out any connection between the two parts at all. A wandering spleen may be found in the most variable positions—one day in the right iliac fossa, another in the left, or even deep in the pelvis adjacent to the uterus; and it is clear how difficult the diagnosis may be in some such cases. It is not always possible to decide that the wandering organ is not in its right place, though the effort should always be made to determine this. Helpful points are: the fact that a movable or floating kidney never passes across the middle line, and that it is always better felt bimanually; and that a displaced spleen almost always comes in front of the colon and small intestines, and that it can nearly always be pushed back into its normal site.

As examples of over-distended organs that may give rise to difficulties, the stomach and the bladder may be mentioned. The latter is practically always median; it should disappear on micturition or on the passage of a catheter, but this is not absolutely always so, and it has sometimes given rise to an erroneous diagnosis of pregnancy, whilst, on the other hand, what is really an appendicular abscess in the middle line has been thought to be a distended but otherwise normal bladder. The stomach may be over-distended with either gas or fluid in such a way as to simulate a serious abdominal tumour, of which all signs may have disappeared by next day. The tumours that may be simulated by inspissated fæces in the large intestine are well known to all. The difficulty is a common one. In cases of chronic

constipation the nature of a rosary-like series of small, hard lumps beneath the abdominal wall may be obvious; on the other hand, the fæcal mass may be extremely like a carcinoma of the sigmoid flexure, the cæcum, or of one of the flexures. Enteroliths and the like are only special forms of fæcal masses. It is only necessary to add that it by no means follows that a mass is not fæcal when it does not disappear after there has been an abundant evacuation of the bowel.

We may now pass on to the last of the main headings given above—namely, conditions spastic or spasmodic contraction of portions of the alimentary canal simulating tumours.

If one palpates the epigastrium and the region of the pylorus in one and the same individual at different times, it will become clear that, notwithstanding the general teaching that the pylorus is entirely covered by the liver, it can be recognised by palpation far oftener than one might expect—provided, of course, that the muscular development or stoutness of the patient allow of adequate palpation at all. The fact of the pylorus being palpable in this way depends partly upon the thinness of the edge of liver which can readily be pushed up out of the way when deep palpation is being made, but still more upon the motility of the stomach, which produces considerable physiological variations in its topography. When the stomach is empty the pylorus is known to approach the middle line, or even sometimes to lie slightly to the left of the middle line, and as the stomach becomes filled it moves over towards the right. Under certain circumstances, however, the power of the pylorus to "wander" is very much greater than this—in conditions of gastroparesis, for example, or when the organ becomes deformed by gastrectasis. The most extreme degrees of wandering of the pylorus are seen in cases of carcinoma of that end of the stomach; for it may leave the epigastrium entirely, and be found in the hypogastrium or one of the iliac fossæ. The most remarkable example of this fact is recorded by Chiari (*Prager Medizinische Wochenschrift*, 1888), who once met with it in a right-sided inguinal hernia. It is scarcely necessary to insist further upon the importance of this variability in pyloric topography. The forms under which the pylorus presents itself vary with the degree of contraction in the pyloric ring itself, and in the pyloric segment of the stomach. Sometimes it feels like a band, sometimes like a tumour the size of a walnut or a hen's egg, and quite hard; it may extend more or less towards the left according as more or less of the pyloric portion of the stomach assists in the tonic spasm of the pylorus itself. Amongst the various conditions that have been accused of producing phantom tumours from such pyloric spasm may be mentioned mechanical or chemical stimulation by the gastric contents, abnormal quantity or quality of the food, hyperacidity, gastro-succorrhœa, excessive gas formation, ulcers or erosions at or near the pylorus, inflammations around it, and finally influences of a purely functional nervous character. An instance in point is the following: A nervous woman of thirty-seven had for several years suffered from pains in the stomach region, together with vomiting and constipation. The stomach now reached barely to the umbilicus, there

was a well-marked succussion splash, and in the epigastrium in the regio pylorica there was to be felt, though not at every examination, a hard tumour about the size of a small apple, movable, tender to pressure, and situated to the right of a readily palpable aorta. The diagnosis was an ulcer at the pylorus with extensive infiltration around it. An operation was performed, and no tumour was to be either seen or felt. After about three minutes, however, the pars pylorica ventriculi passed into so firmly contracted a condition that it constituted a hard tumour-like mass three inches long and nearly two inches thick. There was at the same time a sort of twisting or erection of the contracted portion of the stomach, bringing it closer to the anterior abdominal wall. After about three-quarters of a minute relaxation came on slowly, and the tumour disappeared. Notwithstanding deep chloroform narcosis this phenomenon was repeated three times within a few minutes. There was no microscopic disease of the stomach at all.

Instances of this kind might be multiplied indefinitely. In children it has sometimes been possible to feel the stomach contracted up into a small epigastric tumour. In the so-called congenital pyloric stenosis a pyloric lump, attributable to spasm, has not infrequently been felt. It may simulate the mass of an intussusception. Whether the spasm is due to hyperacidity or other error of the gastric juice, or whether the errors in the gastric juice are secondary to pyloric spasm, is a question that has never been satisfactorily answered.

How careful one must be in giving an opinion about such spasm-tumours is well exemplified by those cases of simple pyloric ulcer in which, notwithstanding the most careful treatment, hæmorrhage may occur repeatedly, and emaciation may be so great as to suggest that the ulceration is really cancerous. Kampmann (*Strassburger Medizinische Zeitung*, 1907) records the case of a man aged 44, whom he saw in Ewald's wards. This patient had suffered from gastric symptoms on and off for ten years. The diagnosis made was gastro-succorrhœa, with an ulcer at the pylorus. Beneath the edge of the right lobe of the liver in the right para-sternal line, one was able to make out almost constantly a tumour that was tender to pressure, and about the size of a small hen's egg. This, coupled with the facts that the vomit repeatedly contained blood, and that the patient looked decidedly ill and wasted, gave a grave appearance to the case. An operation was performed with the object of possibly being able to remove an early carcinoma. The tumour turned out to be nothing more than the spasmodically contracted pars pylorica of the stomach, with a chronic ulcer on its posterior wall.

The duration of such a spasmodic contraction is very variable. Whereas the mass may last only a few seconds or minutes, and thus be felt obviously relaxing under the palpating fingers, it may, in other cases, persist for hours or even days at a time. Rütimeyer and others have recorded cases in which chronic spasm of the pylorus has remained

palpable and apparently unchanged for months. The mere fact that a tumour persists, or appears to persist, from day to day is therefore no absolute proof that the tumour is not a phantom one.

Turning now to a similar state of affairs in the intestines, it is particularly the cæcum, the ascending colon, the transverse colon, and the sigmoid flexure that admit of being palpated through the abdominal parietes; and according to their contents and the degree of spasmodic contraction of their walls they may either not be palpable at all, or else distinctly felt either as soft strands or columns, or as more or less hard tumours. The small intestine is much less often palpable, though entero-spasms may sometimes cause phantom tumours similar to those produced by the colon.

Remarkable tumour-like masses due to spasm can be felt in some cases of chronic colitis, where in addition to mere spasm there is a considerable excess of musculature owing to hypertrophy from former spasms. On either side of the rectus abdominis muscle in the upper part of the abdomen, it is not infrequently possible to feel the corresponding portions of the transverse colon, and it is easy to be led into the belief that there is a well-defined tumour. The apparent clearness of definition of the mass is due to the fact that the ribs cover both the hepatic and the splenic ends of the transverse colon, and the rectus abdominis muscle covers its centre, so that instead of being able to palpate the transverse colon continuously, one is often able only to feel separate portions of it between the ribs and either the left or the right outer border of the upper portion of the rectus abdominis muscle.

Circumscribed spasmodic "knots" in the large intestine, due to persistent local contraction of portions of the bowel, are becoming recognised as a very real cause of difficulty in the diagnosis of acute abdominal conditions, apparently requiring immediate laparotomy, and sometimes the long-maintained spasm of the bowel may produce a definite mass, unilateral and hard, and quite as well-defined as a neoplasm. The lesion is probably an intestinal neurosis. It has led to the performance of many a laparotomy at which no microscopic disease could be found. West records several cases of the kind. Kampmann tells of a tailor who was thirty-five years of age, and highly neurasthenic, and who had been suffering for a year from abdominal pains of the most variable description and from diarrhœa. He thought he had a tumour, but he was kept under observation for some time without any being noticed, until one day there appeared a firm tender lump the size of a hen's egg, apparently in the upper part of the ascending colon, close to the hepatic flexure. It was true that the patient was suffering both from sleeplessness and from the most extreme degree of neurotic phenomena, but the lump seemed real enough. A fæcal mass was excluded by the form and consistence of the lump, and also by the fact that the bowels were being regularly and freely opened. The mass could be made to disappear gradually by persistent circular massage, though it returned again thereafter.

SURGERY.

ENLARGEMENT OF THE PROSTATE.—I.

ENLARGEMENT of the prostate is an affection which is confined to the later decades of life. It is rarely met with in men under the age of fifty. In recent years, since the operation of prostatectomy has been more extensively practised, and since therefore one has been able to examine the exact condition in a great number of cases, it has come to be recognised that a large variety of different conditions are responsible for the symptoms which are classed under the title "enlargement of the prostate."

In fact, a genuine hypertrophy of the gland, in which all the elements composing its structure are included, is the exception rather than the rule—*i.e.* an enlargement that can be regarded as analogous to a parenchymatous goitre. The enlargement is more often in the nature of a fibrosis, and the most reasonable hypothesis which can be put forward to account for this condition is that it is the result of a chronic prostatitis, possibly from a gonococcal infection many years previously. In these cases the prostate may be little, if at all, larger than normal, owing to the contraction of the fibrous tissue; yet all the symptoms of enlargement of the prostate will be present owing to a distortion of the prostatic urethra. From an operative point of view, the enucleation of such a prostate presents more than ordinary difficulty.

In other cases the enlargement is due to the formation of a benign tumour in the gland, and both adenoma and fibromyoma have been described. Since the prostate is a sexual organ, and is the analogue in the male of the uterus in the female, one might expect a fibromyoma to be a common occurrence; and yet experience shows that this is not the case. Fibromyoma of the prostate is comparatively rare. A simple adenoma, when it occurs, generally causes a localised enlargement of one lateral lobe, thus distorting the urethra and giving rise to the symptoms about to be described. It is only when the adenoma is localised and encapsulated that the obstructing mass can be removed without interfering with the continuity of the prostatic urethra. Carcinoma is also a cause of enlargement of the prostate, and when it occurs starts in the glandular tissue of the organ. Yet this is not always so. In a case recently seen by the writer, the patient, a man of seventy-one, was undoubtedly suffering from symptoms referable to enlargement of the prostate. Rectal examination revealed a hard mass pressing back on the anterior wall of the bowel, and the bladder contained four ounces of residual urine. The bladder was opened by suprapubic cystotomy, and the prostate could be felt forming a prominent projection into the base of the bladder. It was enucleated. The gland itself was apparently normal, but it lay perched upon a bed of hard tissue. Some of this was also removed. Microscopical examination showed that the prostate itself was normal, but that there was malignant disease of the peri-prostatic capsule.

There remains yet another variety of enlarged

prostate, the so-called "enlarged middle lobe," on which great stress was laid in the days when our knowledge of this condition was less perfect. The real state of affairs found in the cases described under this heading is usually a polypoid excrescence growing from one of the lateral lobes, either a pedunculated adenoma or an outgrowth of granulation tissue, which falls over and occludes the orifice of the urethra by a species of ball-valve action, in much the same way as a pedunculated growth from the pelvis of the kidney may occlude the opening of the ureter. In these cases the symptoms are somewhat different, the patient complaining of periodical attacks of retention of urine, requiring the passage of a catheter.

The pathological changes are easily understood. The first result of enlargement of the prostate is obstruction to the outflow of urine; and hypertrophy of the bladder, as shown by fasciculation of its walls. But soon even the hypertrophied bladder is unable to do its work, and hypertrophy is succeeded by dilatation, as happens in other hollow viscera whose outlet is obstructed. The same phenomena are seen in stenosis of the pylorus. In cases which have been left unrelieved for any length of time, the ureters may also become dilated and hydronephrosis may supervene. This, however, is not common. The enlarged prostate forms a projection in the base of the bladder, and behind this a cavity is found in which urine is retained after the bladder has apparently been emptied by natural means. The urine so retained is known as "residual urine."

The first thing which the patient notices is increased frequency of micturition, and he is disturbed at night by the necessity of getting up to pass his water. This is followed by increased urgency of micturition; he feels that as soon as the desire to micturate comes upon him, he is unable to delay; and yet when he does try to micturate, the flow does not come at the beginning of the attempt. When it does come the power of projection is diminished, the act takes unduly long, and there is some dribbling at the end. Even then he is left with the sensation that he has incompletely emptied his bladder.

As the disease advances all these symptoms increase in severity, and there comes a time at last when his urine is continually dribbling away from him, and his life is made unpleasant by the constant presence on his clothes of urine which is undergoing ammoniacal degeneration.

In many cases there is occasional hæmaturia, even though no catheter has been passed. This is due to the fact that the enlarged prostate is engorged and bleeds readily, and the contractions of the bladder at the end of micturition are sometimes sufficient to produce this effect of their own accord.

Small clots may thus be passed, and have been known to become impacted in the urethra, generally at the narrowest point opposite the corona glandis, leading to absolute retention of urine. If recognised, the condition is easy to treat. Firm but steady pressure with a gum elastic catheter will dislodge them.

DISEASES OF CHILDREN.

THE VOLUNTARY NOTIFICATION OF SUMMER DIARRHOEA.

THE report of the results of the voluntary notification of zymotic enteritis in the Borough of Woolwich, by Dr. Sidney Davies, the Medical Officer of Health, is of some interest. In spite of the fact that it is based on only 844 notified cases, and that the system has been in force for only four years and during the months of July, August, and September, it confirms the views generally held on the causes of this fatal disease in infancy. Rather more than half the cases were under one year of age, rather more than one-fourth were in their second year, about 10 per cent. between two and five years, and 10 per cent. over this age. The mortality was 14 per cent., varying from 11 to 17 per cent. in the different years. As usual, the highest mortality was in the first three months of life, and the incidence of the disease greatest in the second three months. The mortality rate decreased as the age of the sufferers increased, and was least when the affection was least prevalent. No doubt diminished prevalence indicates diminished virulence and infectivity. Inquiry into the mode of feeding confirmed our knowledge of the value of breast-feeding as a preventive, and of the frequency of the disease in proportion to the frequency of erroneous methods of feeding. Depot milk proved valuable as a preventive. Not much importance can be attached to this, for, in addition to the cleanliness of the milk, the mothers are more or less supervised and advised on the methods of feeding and general cleanliness. Contrary to what is generally accepted, it does not appear that condensed milk is any less dangerous than fresh milk. The dietetic facts favour the opinion that all erroneous methods of feeding, which are liable to disturb the digestion and interfere with the nutrition and general well-being of the child, are predisposing causes of infection. The incubation period varied from two to seven days.

THE CAUSES OF EPIDEMIC ENTERITIS.

Overcrowding held its own as one of the factors affecting the prevalence of the disease, but, curiously, the evidence in favour of dirty houses as a cause received no support. The distribution of infected houses was more or less in groups, and suggested that the mode of spread in many instances was from the backs of the infected houses to the backs of those in the immediate neighbourhood, and the adjacent ones on each side. This mode of spread strongly supports the opinion commonly held that the disease is spread by flies carrying the infection from faecal or infected material. Manure pits did not seem to affect the distribution, probably because the stables in Woolwich are not often situated among working-class dwellings. Privy middens are much more likely sources of infection. Manure pits may be breeding-grounds for flies, but, so far, there is no evidence that the specific organism of zymotic enteritis is there developed. Observations on the temperature of the air and the soil showed that a high reading of the 3-foot ground thermometer once

reached is more generally coincident with epidemicity and virulence than the maintenance of a high average temperature throughout the quarter. Once a high-ground temperature is reached the infective agent multiplies freely outside the body and the disease becomes prevalent, even though the temperature falls. The maximum incidence was on an average three weeks later than the highest ground temperature. Rainfall and bright sunshine seemed to be merely subsidiary agents. A high ground temperature was a more important cause than a high atmospheric temperature.

Dr. Davies considers that the results of notification have been satisfactory, and that the system should be continued.

His main argument in support of this is based on a comparison of the death-rate in Woolwich and London in the summer quarters of the last eight years, but we fear that an analysis of his figures weakens their value very considerably. According to his table the death-rate from diarrhoea was slightly higher in Woolwich than in London during the four years 1901-4, when voluntary notification was not in force at Woolwich; but much lower during the past four years—namely 1.37, as compared with 1.77 (given as 1.78 in the table). Analysis of the table, however, shows that in 1901 the death-rates in the two places were practically identical; in 1902 and 1903 the death-rate in Woolwich was only two-thirds of that in London; and that it is only the inclusion of the year 1904, in which the rate was 4.52 as compared with 3.39 in London, that enables him to obtain a mean average death-rate for Woolwich slightly higher than that for London. Nevertheless during the next four years the death-rate from diarrhoea was *each* year less in Woolwich than in the remainder of London.

It is almost a pity that the statistical argument is made use of at all. There is quite sufficient evidence in favour of notification without it. Its main value is preventive, for it leads to the investigation of each outbreak, and the adoption of measures for its prevention; the encouragement of and education in cleanliness and proper feeding; and the strict attention of the public health authorities to sanitary matters. It is more than probable that the abolition of middens and open privies, if it were possible, would lead to a great diminution in zymotic enteritis. Though we must realise the importance of these as breeding grounds of the specific organisms and of the flies which convey the infection to milk, food, and directly to the lips and nasal mucosa of the infant, yet there are other sources of infection, notably the diapers of a baby suffering from the disease. The occurrence of outbreaks in hospitals for children, in wards for babies, may be due to an infected milk supply, but is sometimes the result of carelessness in disposing of the infected articles of clothing, or neglect of washing the hands before preparing the food for the infant.

MEDICO-LEGAL POINTS.

TORTS OF HOSPITALS.

THE case of *Hillyer v. The Governors of St. Bartholomew's Hospital*, which was tried recently before Mr. Justice Grantham and a special jury, raised a question of considerable importance to the governors of hospitals and other charitable institutions. The plaintiff, a member of the medical profession, sued the Governors for damages for personal injuries suffered by him whilst undergoing an examination under anæsthetics. It will be remembered that the plaintiff, who had entered the hospital for gratuitous treatment and examination, said that by reason of the negligence of the defendants or their servants his left arm came into contact with the hot-water tins used for heating the operating-table, and that as a consequence he was paralysed in that arm, while the right arm was also injured. Defendants denied negligence on their part, and asserted, moreover, that the relation of master and servant did not exist between them and those engaged in the examination, and that they were not, therefore, responsible in law. After hearing most of the evidence on behalf of the plaintiff, Mr. Justice Grantham said that, on the pleadings, he considered it would be impossible for the plaintiff to get a verdict. The plaintiff's case had been heard, and he had produced no evidence to lead his lordship to change his original opinion that the plaintiff could not succeed. The causes of the plaintiff's injuries remained as obscure as they were before his evidence was given, and he had not even proved a case of negligence. In his view, the governors would not be liable for the negligence of the staff if proved. There would be judgment for the defendants, with costs.

The cases in which actions have been brought against hospitable and other institutions for the alleged negligence of their medical officers have not been numerous, and apparently in no cases have they been successful. In the case of *Evans v. Mayor of Liverpool* (1906, 1 K. B. 160) the defendants, a local authority, acting under the provisions of the Public Health Act, 1875, provided for the use of the inhabitants of their district a hospital for the reception of persons suffering from infectious diseases. A visiting physician, who was a competent medical practitioner, was appointed to the hospital, and acted under the general directions of the hospital committee of the defendants, the rules providing (*inter alia*) that he should be responsible for "the treatment of the patients from the beginning to the end of their stay, and also for their freedom from infection when discharged." A son of the plaintiff was treated in the hospital while suffering from a mild attack of scarlet fever, and was ultimately discharged by the visiting physician while still in an infectious condition, and under circumstances which a jury found to amount to a want of reasonable skill and care in and about the discharge; for after the boy had returned home he communicated the disease to three other children of the plaintiff. The plaintiff then sued the defendants to recover the expense to which he had been

put in regard to the illness of his other children owing to the premature discharge of his son from the hospital by the visiting physician. It was held by Mr. Justice Walton that the plaintiff was not entitled to recover, for the legal obligation of the defendants extended only to the provision of reasonably skilled and competent medical attendance for the patients, which they had discharged, and that there was no absolute undertaking or obligation on their part that no patient should be discharged by the visiting physician while still in a condition which might cause infection.

In *Hall v. Lees* (1904, 2 K. B. 602) the defendants were an association whose object was to provide for the supply of duly qualified nurses to attend on the sick in a certain neighbourhood. The association for that purpose appointed and paid salaries to nurses, for whose services they made charges to persons on whose application the nurses were supplied. The association printed rules and regulations with regard to the duties of their nurses and other matters with a view as well to the protection of the nurses as to ensuring their efficiency while engaged in nursing. These regulations provided for the exercise of certain supervision over the nurses by a superintendent appointed by the association; but, with regard to the work of a nurse while engaged in nursing a patient, it was provided (*inter alia*) that, while so engaged, she should not absent herself from duty without the permission of the patient's friends, and that she should implicitly follow the instructions of the patient's medical man. A form, which was sent out by the association upon supplying nurses, indicated to the person applying for the nurse that, while engaged in nursing the patient, the nurse was to be regarded as employed by that person. Two nurses were supplied by the association for the purpose of nursing the female plaintiff through an operation which was about to be performed upon her. An injury was occasioned through the negligence of the nurses or one of them. It was held by the Court of Appeal that, upon the true construction of the documents in relation to the supply of nurses, the contract of the association was not to nurse the female plaintiff through the agency of the nurses as their servants, but merely to procure for her duly qualified nurses, and that the nurses were not, in nursing the female plaintiff, acting as the servants of the association, and therefore the defendants were not liable in respect of negligence of the nurses supplied by them.

The liability of the board of governors or committee of a hospital or dispensary to any patient treated there for injuries arising from the negligence of the surgeon or medical practitioner whom they have appointed as their medical officer has been exhaustively discussed in America.

In the case of *McDonald v. Massachusetts General Hospital* (120 Mass. 432) the plaintiff, who had sustained a fracture of the thigh-bone by falling from a building, was brought to the defendant hospital, where he received gratuitously the surgical

and medical care, attendance, and nursing which the hospital afforded its patients, occupying a free bed and having all the expenses attending his injuries borne as a charity by the defendant. The bone was set, in the first instance, by the house pupil, to which the plaintiff objected at the time, as he preferred the resident physician. Both the house pupil and a visiting surgeon afterwards attended the case. The plaintiff claimed that the bone was not properly set, and laid damages therefor. It was in evidence that the house pupil had been well recommended, and that the visiting surgeon was one of several who were selected by the trustees as visiting surgeons (being men of skill and training), and who gave their services without pay. The judge in the Superior Court ruled that "even if the plaintiff should prove that the fractured bone was not properly set, in consequence of the incompetency of the house pupil, or his negligence, or that of the attending physician, the plaintiff was not entitled to recover." The jury found for the defendant, but the Supreme Court of the Commonwealth ordered judgment on the verdict. This case was decided, partially at any rate, on the authority of *Holliday v. St. Leonard's, Shoreditch* (11 C. B. (N.S.) 192), which, after the remarks of Mr. Justice Blackburn in *Foreman v. Mayor of Canterbury* (L. R. 6 Q. B. 218), must be considered as overruled.

In the subsequent case of *Glavin v. Rhode Island Hospital* (34 Am. R. 675) the same point again came up for decision. In that case it appeared that a circular-saw had left but two fingers upon the plaintiff's right hand, and that he applied to the defendant hospital for care and attendance, for which he was to pay a reasonable compensation. He was received by the superintendent, who placed him in charge of a hospital *interne*, who treated the injuries so unskilfully that what the saw failed to do the knife was successful in accomplishing, and the whole arm was amputated. It was shown that no one of the regular, experienced surgeons of the hospital came to see the plaintiff for seventeen hours after he was received in the hospital. The defendant introduced evidence showing that the hospital was administered as a charity, its income being derived from endowments and voluntary contributions; that the physicians attendant on the hospital gave their services without compensation, and the *internes* likewise, save that the *internes* had their board and lodging at the hospital. The charge made to the plaintiff (*i.e.* the "reasonable compensation" above referred to) was designed only to cover board, washing, warmth, and the services of nurses and ward tenders. At the trial a verdict was directed for the defendant. But on the hearing of the plaintiff's petition for a new trial, the full Bench granted the same.

In *Higgins v. McCabe* (126 Mass. 13) the defendant was employed as a midwife at the confinement of the plaintiff's mother. While so employed she undertook to treat the plaintiff, at whose birth she had assisted, intimating that she had cured others similarly affected (*i.e.* with inflammation of the eyes). Her kindly proffered services resulted in the total blindness of the plaintiff. The form in which the case went to the full Bench embraced the ques-

tion of the defendant's liability on account of such services, which were rendered gratuitously and resulted disastrously. It will be noticed that this woman did no more than a stranger might have done. She was hired to assist the mother; she was not employed to tend the diseases of the child. She offered to do merely a friendly act, and she was not an oculist. And so the Court well ruled that, in the absence of any evidence as to whether skill as an oculist was embraced in a midwife's duties, the action could not be maintained.

A physician must apply the skill and learning which belongs to his profession, but a person who, without special qualifications, volunteers to assist the sick, can at most be only required to exercise the skill and diligence usually bestowed by persons of like qualifications under like circumstances. To have held otherwise would have been to charge responsibility in damages upon all who make mistakes in the performance of kindly offices for the sick. But a physician certainly should apply the usual care demanded of him, considering the present conditions of the profession, and the skill employed in cases like the one in which he is called to act. Now while, as a general rule of law, it may be said that a gratuitous agent is liable for gross negligence only, yet the Courts are fast dismissing the consideration of the various degrees of care required by parties, and confine themselves to the one consideration—whether due care was used under all the circumstances in the case. Certainly it would be monstrous for a physician to plead his fee against his own negligence.

In *Glavin v. Rhode Island Hospital* the Chief Justice said: "It is quite conceivable that a corporation might not agree to do more than furnish hospital accommodations, leaving the patient to find his own physician or surgeon. In such a case the corporation would plainly not be liable for the torts of the physicians or surgeons, for in such a case they would not be its servants, and it would not have assumed any responsibility in their selection. But that is not this case. Here the physicians or surgeons are selected by the corporation or the trustees. But does it follow from this that they are the servants of the corporation? We think not. If A out of charity employs a physician to attend B, his sick neighbour, the physician does not become A's servant; and A, if he has been duly careful in selecting him, will not be answerable to B for his malpractice. The reason is that A does not undertake to treat B through the agency of the physician, but only to procure for B the services of the physician. The relation of master and servant is not established between A and the physician, and so there is no such relation between the corporation and the physicians and surgeons who give their services at the hospital. It is true the corporation has power to dismiss them, but it has this power not because they are its servants, but because of its control of the hospital where their services are rendered. They would not recognise the right of the corporation, while retaining them, to direct them in their treatment of patients. But though the relation of master and servant cannot be said to exist between the hospital and the physicians and surgeons attending on it, the hos-

pital does nevertheless assume a responsibility in that it uses its own judgment, or that of its trustees, in selecting them, and impliedly therefore undertakes to exercise reasonable care to get such as are skilful and trustworthy in their profession. A patient has a right to rely on the exercise of such care, and consequently if, through the neglect of the hospital to exercise it, he receives an injury, he is entitled to look to the hospital for indemnity unless the hospital enjoys some extraordinary exemption from liability."

In New Zealand the point has been decided by the Court of Appeal as in *Glavin's Case*, and on the authority of the reasoning thereon. In *The District of Auckland Hospital and Charitable Aid Board v. Lovett* (10 N. Z. L. R. 597) the appellant board was a board incorporated by the Hospitals and Charitable Institutions Act, 1885, and having under that Act the superintendence and control of the A Hospital. C, the medical superintendent of the hospital, was appointed by the board at a salary, and was by the terms of his contract with the board to

have complete control over all departments of the hospital, and the treatment of the patients therein, and was to be responsible to the board alone. The respondent, who was treated surgically by C in the hospital, afterwards brought an action against the board for injury alleged to have been caused by negligence and improper treatment by C. It was admitted that the board had exercised due care in appointing C, that he was duly qualified, that there was nothing unsatisfactory in his previous career, and that nothing had occurred in the hospital to give the board reason to doubt his competence. The treatment of the respondent was purely gratuitous and eleemosynary, a small charge for board only being made. It was held that the liability of his board was the same as that of a private person doing the same things would have been, there being nothing in the Hospitals and Charitable Institutions Act, 1885, to suggest that it should be less; but that there was no liability under the circumstances, the relationship of master and servant not existing between the board and C, the medical superintendent.

OTOLOGY.

PNEUMOCOCCAL OTITIS MEDIA BY CONTAGION.

THAT lobar pneumonia is contagious under certain circumstances is generally allowed. It would doubtless be very difficult to prove statistically that the transmission of pneumonia by contact is more than coincidence; clinically, however, the impression that actual contagion occurs is sometimes brought home to one very strongly.

The pneumococcus is present in normal throats, of course, and it requires either some great increase in the virulence of the micro-organism, or considerable diminution in the patient's general powers of resistance, for a pathological result to ensue. In many cases of apparent contagion it may really be exhaustion of the patient that has led to the victory of the patient's own pneumococci rather than of pneumococci caught from another person. Be this as it may, the possibility of pneumococcal infections being conveyed from one person to another must be allowed; and seeing that pneumococci can produce many different lesions besides pneumonia, it is not surprising if lobar pneumonia in one person may cause acute otitis media in another, as seems to have happened in the following case:

A diabetic patient, aged 65, was attacked by lobar pneumonia at the right base on June 24. There were crepitant râles and bronchial breathing in the right axillary region, and the sputum was viscid and rusty. Notwithstanding the patient's age and the associated glycosuria, recovery took place, the crisis occurring upon the ninth day and convalescence being natural. The patient's wife attended him night and day from the beginning, seeing to the sputum vessels, sponging him and making his bed herself. Perfectly well hitherto, and without any previous illness to be noted, she began to suffer on June 27, three days after her husband's pneumonia set in, from purulent discharge from both ears. The pus had no appreciable smell,

and was whitish in colour, opaque, and very slightly tinged with blood. There was very little constitutional disturbance, and under simple antiseptic treatment she rapidly got well, the discharge being almost nil by the twelfth day. Perforation of each membrana tympani was seen at first, but cicatrization speedily occurred.

The development of this double otitis media, acutely and quite independently of any former illness, in a woman who had been closely associated with a case of lobar pneumonia for three days, raised the question of whether or not it was an instance of contagion. The pus coming from the ear was investigated at a bacteriological laboratory, and pneumococci were found in abundance both in films of the pus and in cultures from it. The case was clearly one of pneumococcal otitis media.

It seems likely that the pneumococci could have been conveyed from the husband to the wife either in the air she breathed or by her hands becoming soiled in dealing with the sputum. According to Zaufal, the diplococcus pneumoniae would seem to be the ordinary pathogenic agent in acute otitis media arising without apparent cause, or as the result of a chill; whereas pyogenic micro-organisms are most often found in secondary otitis media. In this case the pneumococcal lesions may have arisen coincidentally in husband and wife, but the possibility of the one having caught it from the other cannot be gainsaid, so that it would be quite wise to recommend that nurses and other persons who may happen to be closely associated with a case of pneumonia should observe similar precautions to those adopted in cases of phthisis, both as regards the treatment of the patient's sputum, and as regards being themselves out of doors in the fresh air as much as possible when off duty. Antiseptic measures for the hands would not be out of place either.

THERAPEUTICS AND PHARMACY.

SOME PRESCRIPTIONS DISCUSSED—I.

"A SCOTTISH PHARMACIST" some time ago dispensed personally a number of the formularies recommended in the British Pharmaceutical Codex, and in local pharmacopœias, such as that in use in Glasgow and the West of Scotland, and he gives the results he has found in some interesting papers in the *Pharmaceutical Journal*. Sometimes the prescriptions yielded medicines that looked well and remained in good condition for a long time; sometimes, on the other hand, the results were not so good; and in view of the efforts that are now being made to revert to personal prescription-writing, rather than to order proprietary medicines by number, or in other similar ways, it is a matter of some interest to note which prescriptions are satisfactory from the point of view of dispensing, and which are not. In the original papers the quantities are written as percentages, each formulary being made up to one hundred parts. To make the prescription up to an ounce instead of to one hundred parts, it is approximately correct to multiply the quantity of each ingredient by five to give the amounts required of each, in grains or minims. If absolute accuracy is required, it would be necessary to make the mixtures up to 500 instead of to 480 minims.

The following was found to be a very excellent way of prescribing cod-liver oil:

EMULSIO OLEI MORRHUÆ COMPOSITA, B.P.C.	
	Parts.
Cod-liver oil	50.00
Yolk of egg (by volume)	6.50
Tragacanth (in powder)	0.25
Elixir of gluside	0.75
Simple tincture of benzoin	0.75
Spirit of chloroform	3.00
Essential oil of bitter almonds	0.10
Distilled water, sufficient to produce ...	100.00

It is often desired to give olive oil in quantity to patients, for instance in cases of gall-stones, and a precisely similar prescription for olive oil emulsion yields an excellent product, entitled *Emulsio Olei Olivæ Composita*.

When it is desired to prescribe hypophosphites along with cod-liver oil, as in more than one well-known proprietary preparation, the formulary recommended in the codex, is the following:—

EMULSIO OLEI MORRHUÆ CUM HYPOPHOSPHITIBUS, B.P.C.	
	Parts.
Cod-liver oil	50.00
Yolk of egg (by volume)	6.50
Tragacanth (in powder)	0.25
Elixir of gluside	0.75
Simple tincture of benzoin	0.75
Spirit of chloroform	3.00
Oil of bitter almonds	0.10
Sodium hypophosphite	0.75
Calcium hypophosphite	0.75
Distilled water	100.00

It has been found, however, that whereas this prescription gives a good product when it is newly dispensed, in a week or two it becomes too thick to pour from a narrow-mouthed bottle. It is more satisfactory when only nine-tenths of the above quantity of tragacanth is employed.

The prescription which is equivalent to Parrish's syrup or chemical food, is the following:—

SYRUPUS FERRI PHOSPHATIS COMPOSITUS, B.P.C.	
	Parts.
Iron wine	0.40
Concentrated phosphoric acid	7.50
Precipitated calcium carbonate	1.35
Potassium bicarbonate	0.01
Sodium phosphate	0.01
Cochineal	0.38
Refined sugar	70.00
Orange-flower water	3.00
Distilled water, sufficient to produce ...	100.00

The above syrup was found to be a very satisfactory preparation, but it is important that the undiluted triple orange-flower water should be used in making it.

The following syrup, which contains a much larger proportion of iron, was also found to yield a satisfactory product, namely:—

SYRUPUS FERRI SUBCHLORIDI, B.P.C.	
	Parts.
Iron wine	3.50
Hydrochloric acid	10.00
Citric acid	0.10
Distilled water	6.25
Syrup, sufficient to produce	100.00

The laxative compound syrup of figs given by the codex, and having the following formula,

SYRUPUS FIGORUM COMPOSITUS, B.P.C.	
	Parts.
Compound tincture of rhubarb	5.00
Liquid extract of senna pods	10.00
Spirit of cinnamon	1.25
Spirit of nutmeg	1.25
Tasteless liquid extract of cascara sagrada	5.00
Syrup of figs, sufficient to produce ...	100.00

was found to have very little action upon the bowels in most cases, and a much more satisfactory prescription was the following:—

	Parts.
Liquid extract of senna pods	3
Liquid extract of liquorice	5
Tincture of jalap	5
Syrup of rhubarb	30
Syrup of figs	15

Some other useful prescriptions which yielded elegant and stable products, are the following:—

SYRUPUS HYPOPHOSPHITUM COMPOSITUS, B.P.C.	
	Parts.
Calcium hypophosphite	1.00
Manganese hypophosphite	0.50
Potassium hypophosphite	0.50
Quinine hypophosphite	0.25
Strychnine	0.012
Refined sugar	70.00
Hypophosphorous acid	0.625
Strong solution of iron hypophosphite (B.P.C.)	5.00
Chloroform water, sufficient to produce	100.00

The only objection that might be raised to the above syrup, is its colour; but this could merely be on the ground that it is different to that of the usual syrups of hypophosphites.

It is sometimes desired to prescribe formates along with glycerophosphates, and this may very conveniently be done in the form of the *Syrupus Glycerophosphatum cum Formitibus, B.P.C.*, which yields a very satisfactory preparation.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

TONSILLECTOMY.

By PHILIP A. HARRY, M.D., D.P.H.

An article by Dr. Matthews, of New York, in a recent number of the *Annals of Surgery** provides a suitable excuse for drawing further attention to the removal of tonsils by enucleation. The removal of a great number of tonsils by this method during the past year has shown its advantages over any other method. It is thoroughly efficient and so simple that it can be performed by the most newly appointed surgical dresser.

As far as enucleation is concerned, tonsils may be divided into two classes, the hard and the soft. Hard tonsils, large or small, of any size or shape, enucleate with the greatest ease. Soft tonsils, especially if they are also small, feeling like adenoids, are apt to be difficult. But their removal by guillotine is even more difficult. Fortunately they rarely call for enucleation: it is usually the opposite tonsil that is enlarged and has produced symptoms necessitating operation. There are many other methods of removing tonsils. Among others may be mentioned the several varieties of guillotine, which are certainly rapid, but not much more so than enucleation.

The guillotine leaves a cut surface from which hæmorrhage is very often profuse, and by which organisms find easy entrance to the body. Dr. Matthews has seen a first attack of follicular tonsillitis follow partial removal by the guillotine, and it is not at all uncommon to see septic throats after removal by this method. During and after enucleation there is usually a good deal of hæmorrhage, but this can be effectively controlled by a modification in the operation to be mentioned later.

Snares and cauteries which were introduced to prevent or lessen hæmorrhage are often dangerous and unsatisfactory. They require plenty of time and docile patients. Punches and scissors are incomplete. The pillars of the fauces and even the pharyngeal wall may be injured. The method of removing shavings by pulling the tonsil inwards with a special vulsellum and slicing off portions of varying sizes may appeal to some operators. Even with special bistouries damage may be done to the tongue and surrounding structures. The patient requires to be deeply anæsthetised, preferably with chloroform, whereas during enucleation anæsthesia may be very light. Pillar knives, separators, and hooks were introduced by some operators who removed the entire tonsil, not by touch but by sight. These instruments are quite superfluous. It is very rarely that the finger cannot break down the adhesions between the anterior and posterior pillars and the tonsils; indeed, it is rare to find adhesions.

The operation of enucleation can be done by the sense of touch alone. It is necessary to bear in mind a few anatomical facts. The tonsils are collections of lymphoid tissue forming part of the ring of Waldeyer, guarding the entrance to the pharynx and

larynx. They are situated between the anterior and posterior pillars of the fauces, and have a more or less definite capsule. The majority of vessels enter and leave this very vascular organ at its lower part. The internal carotid is one inch external and posterior to the tonsil. Hæmorrhage comes from one or more enlarged tonsillar arteries: it must be remembered that all the important vessels in this region (lingual, facial, ascending pharyngeal, internal maxillary), send branches to the tonsil. For the operation about to be described the best anæsthetic is certainly ether or gas and ether. Chloroform is not safe enough, and ethyl chloride anæsthesia is too short. It may be mentioned here that a widely-opened gag may interfere with the breathing.

The patient should be on a fairly low table, the hair enclosed in a towel or rubber cap. The head remains on a level with the rest of the body. After the insertion of a gag, preferably in the left side of the mouth, the operator stands on the right side of the patient and inserts his left forefinger between the tonsil and the anterior pillar of the fauces. The finger is insinuated backwards and upwards until the external surface of the tonsil is reached, and until the upper half of the tonsil is separated. A small-sized Guy's tongue-forceps† is then taken in the right hand, from an assistant, and with the left forefinger as guide the partly-separated tonsil is seized. The separation is then continued downwards until the lower part of the organ is reached, the tongue forceps pulling gently inwards all the time and also being rotated to the right. It is this rotation to the right for two or three turns that is efficacious. By this manœuvre the largest vessels of the tonsil which enter towards its lower part are twisted and torn, thus considerably lessening the amount of hæmorrhage. This simple modification also greatly shortens the operation.

These remarks apply equally to either tonsil. The gag need not be changed from left side to right. It is not necessary, as Dr. Matthews recommends, to use the guillotine for the final separation: the operation is needlessly prolonged and there is a risk of the tonsil escaping down the pharynx, especially in the case of a deep or double tonsil. It is to prevent this accident that the tonsil is seized when only the upper half is free. The lowest part of the tonsil is always difficult to detach. In some cases there is quite a tough fibrous band to be torn through, and it is while endeavouring to do this that the organ slips away and hangs into the pharynx. Attempts to find it are not always successful; the act of deglutition usually completes the separation.

For small soft tonsils the assistant or nurse should exert pressure behind the angle of the jaw. It is best to remove this variety with the first and second fingers of the left hand working together, or, if

possible, the first finger and thumb. If the tonsil is gripped by the tongue forceps the pull inwards should be very gentle; indeed, the forceps should merely be used to support the separated part.

After the operation is completed the nurse should sponge the patient's face with cold water. It cleans the face, stops hæmorrhage (especially if adenectomy has been done), and helps to bring the patient round from the anæsthetic.

Before he is quite round and while he is lying with his face over the side of the table the finger should be passed over the areas operated on; occasionally there is a small tonsil at the base of the tongue, below the one removed and entirely separate from it. It is advisable not to do more than commence its detachment with the finger. It is then easily removed with the Guy's tongue forceps.

If a tonsil is small and soft it may be torn; no object is gained in attempting to remove the small piece that remains. The advantages of tonsillectomy by enucleation are numerous. The operation is easily performed. The immediate and future results are equally gratifying. It is satisfactory to know that the entire organ has been removed and recurrence impossible. Second, and even third recurrences are not uncommon after the guillotine, bistoury, scissors, punch forceps, etc. Double tonsils are not missed, as they often are with the guillotine and bistoury. By the latter method of performing tonsillotomy not only may a small second tonsil be missed, but if the incision be made from below upwards the lower part of the tonsil may be left.

Enucleation effectively opens up the supra-tonsillar fossa—a favourite receptacle for septic matter. The raw surface left rapidly diminishes in size owing to the falling together of the pillars of the fauces. Decayed molar teeth are not so great a contra-indication to this operation as to tonsillotomy.

Follicular tonsillitis, which may occur after removal of a portion of the tonsil, never occurs after enucleation. The wound heals very quickly. Enlarged glands diminish in size and gradually disappear after tonsillectomy.

The operation can be performed entirely by the sense of touch, and with only two instruments, including the gag. Hæmorrhage is reduced to a minimum by the manœuvre mentioned above. Tonsil hæmostats and styptics are uncalled for. Late hæmorrhage is unknown. Little or no after-treatment is required. Another important point is that the surgeon need not be ambidextrous. With the guillotine and bistoury the non-ambidextrous surgeon must stand behind the patient's head to remove the right tonsil.

The disadvantages of the method are mainly the patients' objections. A lady objected on religious grounds to having her child's tonsil removed by enucleation because she thought the organ was placed there by Providence for some definite purpose. She was, however, perfectly satisfied with the results obtained in an elder brother, who, unknown to her, had had his tonsils enucleated. An abnormal tonsil is always a source of danger, and if removal is called for it should be complete, especially as total removal is just as easy or even easier than partial. The objection that enucleation necessitates an anæsthetic need not be considered, seeing that partial removal by guillotine is always done under an anæsthesia of some kind even where there are no adenoids. Changes in the voice have been mentioned as a disadvantage of tonsillectomy. These changes can only be detected by the objectors themselves. One operator heard of someone who got a septic finger after performing tonsillectomy. The finger was scratched by the sharp teeth of the patient. This accident should not occur if care is taken to keep the gag in position.

RESIDENT MEDICAL OFFICERS' DEPARTMENT.

A CRITICISM OF HOSPITAL REPORTS.

AN "R.M.O." writes: This is the season of hospital reports, and many therefore to whom a well-printed page is a delight must just now be having their æsthetic sensibilities outraged, the only accompanying consolation being the small pleasure of detecting the mistakes of others and feeling consequent superiority. I allude to the grisly list of diseases which commonly figures in these documents, in one of which were found the following mistakes and blemishes: Eneurisis, tinuitis, alveola necrosis, dentigeous cyst, torti-Collis (torticollis not many lines below), Erbs' paralysis, sarcoma of sup. maxillary, Marion Simms for cervical carcinoma.

One could almost excuse an ill-educated and vulgar subscriber for exclaiming he would have "two each way on" the last! The reason for this yearly crop of errors is, of course, that the firms printing and publishing hospital reports have little experience in medical MSS. Yet I have no doubt that the services of a senior medical student as proof-reader could be got pretty easily.

[The first six in the above list are almost certainly misprints, and not mis-spellings. But with regard to the last two abbreviations, which are certainly both ungraceful and obscure, we would remind our correspondent that it may be

with these as with the orthographical errors of the elder Dumas. When taxed with them he would reply airily that that was the printer's affair. Terms full of meaning on the case-sheet may become rather incomprehensible elsewhere. There is much to be said in favour of making the classification of diseases in a hospital report as general as possible.—ED. R.M.O. Department, THE HOSPITAL.]

BOOKS RECEIVED.

CASSELL AND CO., LTD.

"A Manual of Operative Surgery." Third edition. By Sir Frederic Treves, G.C.V.O., C.B., LL.D., F.R.C.S., and Jonathan Hutchinson, F.R.C.S.

"A Handbook for Midwives and Maternity Nurses." By Comyns Berkeley, B.A., M.B., B.C., etc.

HENRY FROWDE, HODDER, AND STOUTON.

"Suture of Arteries." By E. Archibald Smith, M.B., Ch.B., F.R.C.S.

C. MITCHELL AND CO.

"Newspaper Press Directory, 1909."

"Heart Disease Graphic Methods." By J. Hay, M.D., M.R.C.P.

BAILLIÈRE, TINDALL, AND COX.

"Operative Nursing and Technique." By Charles P. Childe, B.A., F.R.C.S.

"Aids to Medicine." By Bernard Hudson, M.D., M.R.C.P.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

GRADUATE STUDY IN AMERICA.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL—(concluded from p. 114).

A FEW days' attendance at the lectures, clinics, and demonstrations given at the school convinces the visitor that the institution is almost ideal of its kind. The teachers have grasped—more thoroughly and more sympathetically in our opinion, than is the case at Milan, Vienna, or Moscow, and certainly every whit as whole-heartedly as in the excellent classes at Berlin, Cologne, and Dusseldorf—the fact that graduate instruction, to be efficient, must differ from the kind of instruction that is given to unqualified students. We find, accordingly, that the specialists who are lecturing or demonstrating here give the men hints and practical notions which are not mere book-maxims. Students are taught more by example than by precept, owing to the material available for demonstration purposes, to become familiar with treatment in all its branches, with up-to-date diagnostic methods, and with operative procedure and after-care. The first demonstration which we had the pleasure of attending proved this in an interesting fashion. This was a demonstration by Professor Caillé on diseases of children. A variety of cases was demonstrated, ranging from a simple capillary bronchitis to a meningitis; those attending were asked to examine each patient and confirm the diagnosis. Questions were freely asked and answered, and at the end a most lucid and informative exposition of substitute feeding was given, it being intimated that upstairs, in the wards, the nurse in charge would be delighted to give anyone a practical demonstration in preparing mucilage, acidulated milk, or any of the dozen substitute foods which had been discussed. Similarly at the operations the steps of each were gone over, the reasons for each individual one explained, and the anatomy of the region briefly elucidated by the professor. It was satisfactory to note that in nearly every case the most modern principles were enunciated, while here and there special work was alluded to. This was specially noticeable in Professor de Garmo's interesting clinical lectures on hernia, and Professor Lloyd's no less interesting demonstrations on empyema. The men attending the demonstrations are graduates from all parts of North America—about 600 matriculating each year. They come for varying periods, and either take a special or the general course or stay for a longer time and take advantage of the unrivalled opportunities the hospital affords, by its house appointments, to acquire a more extended experience in one or other branch which specially interests them. They are keen, eager, willing to work, with active interest in their work and its possibilities. The staff, as we have already mentioned, is fully representative, including such well-known names, besides those already mentioned, as those of Drs. Emmet, Porter, Quintard, Rice, Hammond, Boldt, Meyer, Guiteras, Morris, Einhorn, Gant, Taylor, Fuller, McGrath, Cabot, Knopf (who occupies the special chair of phthisiotherapy), Torek, Lusk, and many others. Each member is attached to some well-known city hospital and is a recognised master in his subject, and, what is much more striking, each appears to have specially qualified for graduate instruction. The various classes we had the pleasure of attending were all, without exception, characteristically admirable, bright, brief, brotherly, as such demonstrations ought to be. In saying that they fully come up to the best German classes,

and that some of them remind one, in their brightness and practical excellence, of those "never-to-be-forgotten-by-those-who-have-attended-them" talks which made Sir Henry Littlejohn one of the most popular of Edinburgh teachers, we are paying the school and everyone concerned in its work the highest possible compliment.

It would be beyond the compass of our limited space to give anything like an adequate outline of the daily scheme of work at the school. A few points must suffice. There are classes in every specialty, arranged to suit the convenience of students. Practical classes are of strictly limited membership, and this valuable rule is never broken. Men attending the surgical, gynaecological, eye, nose, throat, and ear classes are actually the assistants of the professors; every opportunity is given for practical and theoretical work both in the laboratory and at the bedside. Private coaching classes are given by arrangement, and as a matter of fact, by consultation with the secretary any matriculate can secure demonstrations in any specialty he desires. The ordinary courses, again, are thoroughly sound. Let us take, for example, that in surgery as scheduled. Courses in operative surgery are divided into two sections, operations on the living subject and on the cadaver. The former is again subdivided into Class A and Class B. Each class under Section A, which may be taken as a type, is limited to graduates who work under an adjunct professor, and do a certain number of operations on hospital patients, one of them dressing alternately. Each one does eight operations, which, as scheduled, must include four major ones, such as abdominal, cranial, or larger thoracic. The fee is a hundred dollars, all instruments being provided. Similar courses are given in major gynaecological operations, hernia operations, and operations on the eye, ear, nose and throat, and in orthopaedic surgery, etc. Courses on the cadaver, limited to four participants, at fees varying from 25 to 50 dollars, are given in the winter session, and are thorough and full. Regional anatomy courses are given by Professor McGrath for those who desire to supplement their operative work by a course in special dissections. Special classes in particular subjects, such as endoscopy and cystoscopy, are provided, and have proved very popular. In addition there is a fine large reading-room, and, although the club part of the institution has been much less developed than it has been, for instance, at the London Polyclinic, it is the intention of the directors to look after this branch of the institution in an adequate manner when the plans for the alterations are finally revised.

The work in the lying-in department is steadily increasing, and the hospital affords excellent opportunities for those who desire to specialise in gynaecological subjects. There are several women's wards which are always well occupied, and there has recently been developed a special "maternity district," which is in charge of the hospital *internes*, and grants them, for a period of several months, unrivalled opportunities for private obstetric work. A special part of the city, in the neighbourhood of the hospital, is the "Post-Graduate District"; it is visited by the students of the institution, who have been doing praiseworthy work in this section among the poor who cannot afford visiting physicians' fees. In this manner the hos-

pital replaces our district dispensary, such as that of Surrey or Marylebone, and for this work it receives the small city grant already alluded to.

The school is open only to those who have a legal right to practise in the country or State from which they come. There is no distinction made between male and female graduates, with the exception of a few tutorial classes limited to lady graduates. A general ticket available for a year, and admitting to all lectures, demonstrations, and classes except those specially scheduled, costs 450 dollars, a six-weeks ticket 100 dollars, while intermediate tickets can be purchased at proportionate prices. A summer term ticket costs 150 dollars, available from June to October, a monthly term ticket 45 dollars. These fees may appear high in comparison with those exacted in Germany or Italy; but when the difference in price of living and in the general value of money is borne in mind, they must be regarded as being really reasonable. Special coupon tickets are issued to resident physicians in the city who wish to avail themselves of the classes in leisure hours, and these, we understand, are exceedingly popular.

We have laid stress on the admirable opportunities which the institution affords for practical work. In accordance with the prevailing American rule, the four vacancies on the house staff are annually filled by graduates chosen by competitive examination, a system which has worked well so far. These *internes* hold office for two years, during which time they have the best chances for perfecting themselves in their work. There are also ten *externes* vacancies, which are filled quarterly, and for *internes* in special departments, which are filled yearly. All these chances make the institution one of the best for the purposes of the graduate student who has the time and the energy to devote a couple of years to special study. Nor, from what we find, does the institution hold men back from being true to the ideal of graduate study in its best sense by travelling abroad to study other methods and perfect their knowledge by comparison. Many of its students cannot afford to do so; but a number go to Europe, while others again return

to the school for a course every year or after a longer period of private practice. The influence of the school has been for good all along the line. It has been the pioneer institution in America, and it has done admirable work—work that can hardly be sufficiently appreciated—in interesting the profession in the graduate instruction ideal. It would be invidious to compare it with other institutions which serve a similar object; in a manner it would be impossible to do so, for no other institution stands in exactly the same position.

This, however, we may be allowed to say in conclusion. The New York Post-Graduate Hospital and Medical School stands as the realisation of an ideal which many members of the profession in England cherish, and which some of us hope to see carried out in the near future. There have been great difficulties in realising that ideal in America; there are greater difficulties, perhaps, with us. Here the inequality of medical qualifications has hampered the institution to a certain extent; in England the graduate study ideal has hardly yet reached that state of development which makes a national effort possible to carry out the aspirations of its enthusiastic supporters. Recently, however, the proposal has been made to devote the munificent legacy to hospital interests made by the late Mr. Barnato to the founding and endowment of a graduate hospital. If that proposal is carried into effect, the executors cannot do better than take into serious consideration the work and the excellent progress which the New York institution have made. For the Post-Graduate Hospital and Medical School may well stand as a model and pattern for any other institution which is to be founded on similar lines, since it stands to-day as a practical illustration of the possibility of combining a graduate instruction school with a general hospital for mutual benefit and gain.

In conclusion, we desire to express our thanks to Dr. Brush and the various professors and demonstrators of the hospital for their unfailing courtesy and help, without which it would have been impossible to investigate the institution and report upon its progress.

NEW APPLIANCES AND THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

REGULIN.

(CHEMISCHE FABRIK HELFENBERG, A. G. London Agents: MATTHAEI and Co., 12 and 13 Cullum Street, E.C.)

We have received a sample of this laxative medicine. Two forms of it have been submitted to us. The original preparation is in the form of gum-like scales and tablets. This substance, as is well known, consists of agar-agar or so-called Japanese isinglass, which is really the dried jelly of *gelidium corneum*, a species of seaweed, to which has been added a small quantity of some purgative extract, probably cascara sagrada. Regulín acts by virtue of the fact that when it is submitted to the moisture of the intestine it swells up into a thin jelly, and thus increases the volume and softens the consistence of the *fæces*. In addition to this, the purgative principles it contains slightly stimulate peristalsis. It is quite tasteless, and can be taken in doses of from one teaspoonful to two tablespoonfuls. The best method of administering it is in stewed fruit or cooked vegetables, to which it should be directly added in the above quantities. The tablets, three to six of which is a dose, should be eaten directly after a meal or swallowed or partly masticated and washed down with water. They are flavoured with sugar and chocolate, and the taste of them is quite good. Regulín can be taken quite regularly without any diminution in its activity. There have been

many imitations of it put on the market, but it is only fair to say that the substance made by the above firm is the original one.

We regret to announce the recent death of Dr. Gerald Francis Yeo, M.D., F.R.S., F.R.C.S., Emeritus Professor of Physiology at King's College, London. Professor Yeo was born in 1845, and was educated at Trinity College, Dublin, where he obtained the M.B. degree in 1867. He subsequently studied physiology in Paris, Berlin, and Vienna, and in 1874 was appointed Professor of Physiology at King's College. He occupied this important Chair for sixteen years with much distinction, and the high esteem in which he was held by contemporary physiologists is further shown by the fact that he was for fifteen years hon. secretary to the Physiological Society. For a short time in the earlier part of his career he had practised as a surgeon in Dublin, and from 1871 to 1874 he taught anatomy in the University of that city, but his tastes and abilities soon led him towards the exclusive study of the science with which his name is associated. His principal published work was a "Handbook of Physiology." Professor Yeo retired from active work some years ago, and spent his later days in South Devon. He was an enthusiastic yachtsman.

15 EDITOR'S LETTER-BOX.

INFANTILE MORTALITY IN WORKHOUSES.

To the Editor of THE HOSPITAL.

SIR,—The Local Government Board has taken an unusual step. It has published as a Parliamentary Paper a defence of the workhouse nurseries, seeking to show that their condition is satisfactory, and that there is no greater mortality among the babies born than may properly be expected. The careless reader, like the complacent guardian of the poor, may easily suppose that the things which the Commissioners have themselves personally seen in the workhouse nurseries, like the damaging evidence of the official reports themselves, are all a delusion, and that the workhouse nursery is the best possible.

But let us look a little closer at this "whitewashing" report. Notwithstanding the appeal that we made for official statistics of the ten or twelve thousand babies annually born in the workhouses, the only figures now vouchsafed relate to London alone. So far as they go these are actually confirmatory of the statistics of the Minority Report. We stated that out of 8,483 babies born in 1907 in 450 workhouses, 1,050 died on the premises within that year, being 12.4 per cent. of the whole (all readmissions being, by the way, excluded); and that the deaths during the first week were from 40 to 45 per 1,000 births. The figures which Mr. Burns has been persuaded to publish show that out of 2,653 children born in Metropolitan workhouses during 1907, 312 died on the premises within twelve months of birth, including readmissions, being 11.7 per cent. of the whole; and that the mortality during the first week was 42.2 per 1,000 births—admittedly "nearly double the corresponding rate obtaining among the general population." If this is the case in the Metropolitan infirmaries, what is it likely to be in the rest of the Kingdom, where (with some conspicuous exceptions) the general mixed workhouses are older, less well-equipped, and less well-staffed than the London infirmaries? Moreover, what is the use of publishing testimonies to the excellence of the lying-in wards, when what is in question is the state of the infant nurseries? I challenge Mr. Burns to publish exact statistics of all the births in the Poor-law institutions of England and Wales for the past five years, together with the corresponding infantile deaths on the premises at each period of life in such a way as to be comparable with the Registrar-General's figures for the general population.

But the Local Government Board is apparently quite satisfied that the babies in the workhouse nurseries—with ample food and nursing, and constant attendance—should die at twice the rate of the babies of the general population, exposed to all the risks and hazards of the average household. The excess is apparently to be fully accounted for by "pre-natal and maternal conditions." This argument would have sounded equally valid if four-fifths of the babies had died! Unfortunately, however, it does not account for the startling differences in infantile mortality between adjoining unions in the same town (not, by the way, as is disingenuously suggested, between urban and rural populations). It may be difficult to keep down the infantile mortality of a London workhouse lying-in ward (average 42.2 per 1,000 for the first week) to the rate of the Rotunda Hospital at Dublin, where it is less than a quarter of this figure. But how is it that in one workhouse nursery ten times as many babies die per 1,000 births as in another? Can there be all this difference between the "pre-natal and maternal conditions" of the women coming in to be confined; and are we to take it

for granted that these differences accurately correspond with the varying infantile death-rates of the several workhouses? I cannot help thinking that the L.G.B. statisticians know better than that.

It is, indeed, an interesting fact that some of the workhouse nurseries (including some dealing with the poorest slums of London and other large towns) have, with all the terrible "pre-natal and maternal conditions," actually a lower infantile mortality than prevails in the general population. I feel that, by giving in the Minority Report only the average for the whole, we failed to do proper justice to these excellent unions, which have overcome so many difficulties; and at the same time we understated our case. Why is it that such unions (to take only some of the good cases) as Stepney, Camberwell, Marylebone, St. George's in the East, and St. George's, Hanover Square, in the Metropolis, or Ashton-under-Lyne, Stockport, and Prescott, in the manufacturing districts, can all show infantile death-rates comparable with those of the best maternity hospitals, and considerably lower than those of the general population; whilst other unions of the Metropolis not poorer than Stepney or St. George's in the East, and unions in provincial towns having populations closely resembling those of the industrial towns mentioned, have infantile death-rates six, eight, and ten times as great? If the adverse influence of the "pre-natal and maternal conditions" has been overcome in some unions, how is it that other workhouse nurseries actually in the same town, or dealing with quite similar populations, kill off their babies at ten times the rate; and have been allowed to do so, year after year, without criticism or rebuke? Unhappily the "whitewashing" Memorandum now published will encourage these bad unions in their self-complacency.

To my untutored mind—I ask any mother whether I am not right in this?—the following facts (none of which are refuted or denied) have at least something to do with it.

1. In some workhouse nurseries the babies never get into the open air from the time they are born until they die, or leave at three or four or five. This fact seems incredible, but the L.G.B. does not deny it. In fact, it sanctions placing the nursery on a fourth story, without even balconies.

2. Whilst the nursing staff is slowly improving, in most nurseries of general mixed workhouses the babies are still handled, in the main, by pauper women (this not yet being forbidden by the L.G.B.), many of them feeble-minded, and occasionally even imbecile.

3. In some workhouse nurseries not even one trained nurse is in charge (this not yet being required by regulation).

4. There is no "quarantine" of newcomers; a perpetual stream of infants from 0 to 4 pours in from the worst home conditions without a probation ward, straight into the nursery. No wonder that measles and whooping cough are "troublesome"!—I am, etc.,

BEATRICE WEBB (Mrs. Sidney Webb).

41 Grosvenor Road, Westminster.

THE POLYCLINIC DINNER.

THE Ninth Annual Dinner of the Medical Graduates' College and Polyclinic will be held at the Trocadero Restaurant, Piccadilly Circus, on Monday, May 24, at 7.15 for 7.30 p.m., under the chairmanship of Professor Howard Marsh, M.A., M.C., F.R.C.S., Professor of Surgery in the University of Cambridge. During the evening a presentation will be made to Captain Pinch, F.R.C.S., late Medical Superintendent of the Polyclinic. The price of the dinner will be 7s. 6a. (exclusive of wine).

NEWS AND COMING EVENTS.

THE Emperor of Austria has conferred upon Dr. Carl Harrer, Physician to the Austro-Hungarian Embassy and Consulate-General in London, the Knighthood of the Distinguished Order of the Iron Crown of Austria.

THE annual dinner of the Royal Sanitary Institute will be held on May 11 at the Langham Hotel, when the chair will be taken by the Duke of Northumberland, the President of the Institute.

DR. J. LUCAS-CHAMPIONNIÈRE, President of the International Society of Surgery, will deliver the annual address to the Cardiff Medical Society on Friday, June 4. The address will deal with the Modern Treatment of Fractures.

THE fifth International Congress of Dental Surgery will be held at Berlin from August 23 to 28. The work of the Congress will be distributed among twelve sections. The General Secretary is Dr. Schaeffer-Stuckert, of Frankfort-on-Main (Kettenhofweg, 29), to whom all communications relative to the Congress should be addressed. In connection with the Congress there will be an exhibition.

A FESTIVAL banquet in aid of the maintenance fund of the Mount Vernon Hospital for Consumption and Diseases of the Chest, Hampstead and Northwood, will be held at the Hôtel Cecil on Thursday, May 13, at 7.30 p.m., when Viscount Clifden, Deputy-Chairman of the Committee of Management, will preside.

HIS Excellency the Ambassador of the United States of America (Mr. Whitelaw Reid) has consented to preside at a Festival Dinner to be held at the Hôtel Cecil on Wednesday, June 9, in the hope that he may be instrumental in bringing substantial help to the work of the London Fever Hospital, Liverpool Road, N. Invitation cards will be forwarded to those who wish to be present by Major W. Christie, the Secretary of the Hospital, who will also receive and acknowledge contributions.

THE annual meeting of the Invalid Children's Aid Association will be held by kind permission of Lord and Lady Newlands at 16 Grosvenor Place, S.W., on Tuesday, May 25, at 3 p.m. Field-Marshal Lord Grenfell will preside, and the Bishop of Stepney and Sir Alfred Fripp, F.R.C.S., will be among the speakers. Tickets of admission can be obtained from the Secretary, 69 Denison House, Vauxhall Bridge Road, S.W.

THE Annual Middlesex Hospital Founder's Day Commemoration Service will be held in the Hospital Chapel on Wednesday, May 19, at 3.30 p.m., when a sermon will be preached by the Rev. Herbert E. Gunson, M.A., the Chaplain. After the service visitors will have the opportunity of inspecting the wards of the hospital, and will be entertained at tea by the invitation of Lord Cheylesmore and members of the Weekly Board of Governors, in whose name the cards of invitation are issued.

By the kind permission of Mary Countess of Ilchester, a concert in aid of the Chelsea Hospital for Women will be held in the Garden Ballroom at Holland House, Kensington, on Friday, June 11, at 3 p.m., when the Gardens at Holland House will be thrown open to the audience. The hospital is now in need of financial assistance. An amount of £2,000 beyond its regular income is needed annually to provide for ordinary expenditure. The concert will be under Royal patronage.

A SPECIAL meeting of the Irish Medical Schools and Graduates' Association will be held at Harrogate on Saturday, May 22. Arrangements have been made with the Majestic Hotel to permit members to remain until Monday and visit places of interest in the neighbourhood. Full particulars may be obtained from the hon. secretary, 30 Myddelton Square, London, E.C.

A SPECIAL meeting of the Dermatological Section of the Royal Society of Medicine will be held at 20 Hanover Square, London, W., on Thursday, May 20, at 5 p.m., when Dr. Louis Wickham, of the Radium Institute, Paris, will give a lecture-demonstration on "The Therapeutics of Radium."

THE annual general meeting of the Medical Defence Union (Limited by Guarantee), will be held at the medical library of University College, Bristol, by permission of the authorities, on Thursday, May 27, at 4.30 p.m., when the Annual Report will be presented and the usual statutory business transacted.

THE tenth meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on April 28, Mr. Almeric W. FitzRoy, the Clerk of the Council, presiding. Five witnesses—personally connected either with obstetrical nursing or with its organisation—attended and gave evidence.

THE Ingleby Lecture for 1909 in the University of Birmingham will be delivered on Thursday, May 27, at 4 p.m., in the Medical Lecture Theatre, by Sir Thomas Barlow, Bt., K.C.V.O., M.D., F.R.C.P., Professor of Clinical Medicine, University College Hospital, London. The subject will be "Raynaud's Disease and Erythromelalgia: a Summary and a Review."

THE fourth International Milk Trade Congress will be held, under the patronage of His Royal Highness the Grand Duke Joseph, at Buda-Pesth, from the 6th to the 11th of June, this year. The questions to be discussed are divided into three groups—legislative and administrative, hygienic and veterinary, and industrial. It is announced that some 600 persons will take part in the Congress, and that sixty communications have already been received by the secretary to the Congress.

A SESSIONAL meeting of the Royal Sanitary Institute will be held in the Parkes Museum, Margaret Street, W., on Wednesday, May 12, at 8 p.m., when a discussion on "The Passage of Excreta through House Drains" will be opened by Mr. H. A. Roechling, M.Inst.C.E., F.G.S., Fellow of the Institute. The chair will be taken at 8 p.m. by Mr. H. D. Searles Wood, F.R.I.B.A., Chairman of the Council. Tickets for admission of visitors may be had on application from Mr. E. White Wallis, Secretary. Tea and coffee will be served after the meeting.

THE Faculty of Medicine of the University of Birmingham announces that the remaining two lectures of the course upon "The Essentials of Physiological History" to be delivered by Dr. David Fraser Harris, M.D. Glas., B.Sc. Lond., F.R.S.E. (Lecturer in Physiology), during the present Summer Session in the Medical Theatre, will take place at 4 p.m. upon the following dates: May 13—"The History of Knowledge of the Respiration"; May 20—"The History of Knowledge of the Nervous System." Members of the medical profession and students of medicine are invited to attend.

NURSING ADMINISTRATION.

THE NEED FOR WELL-EDUCATED PROBATIONERS.

In the announcements displayed in nursing papers for probationers the stipulation is now almost invariably made that applicants must be "well educated." The larger general hospitals do not of course need to advertise. It is the cottage hospitals, the fever and smaller special institutions which sometimes make known their wants in this way, and the striking change which has taken place in nursing during the last ten years is emphasised by the announcement that even for these posts, which cannot in the nature of things lead on to the highest prizes in the nursing world, "good education is essential." The phrase is to some extent intended as protective. The matron who advertises is overwhelmed with utterly unsuitable applications, and hopes to guard herself from the rush of inadequate candidates by letting it be known that a certain degree of aptitude for learning is necessary. The term is relative, and implies in effect very little. But it does express the common preference accorded by matrons to women who have profited by mental training and are qualified as regards memory and caligraphy to understand and transmit written instructions, and acquire without too much difficulty an unfamiliar nomenclature. There can be no doubt that the disposition to engage only such probationers as are capable of taking an intelligent interest in their work marks a great advance in nursing ideals. It need not be regarded as an attempt to discredit those whose education has been conducted in the elementary schools. The girl who has passed the seventh standard is probably far better prepared to listen to lectures and take notes than the girl who has had a private governess or spent years at an expensive boarding school. In the elementary schools the instruction given approximates far more closely to the kind of teaching available for the hospital probationer than does that at the private school. The classes are large; the amount of individual attention which it is possible to bestow is small, and the pupils are compelled to do a great deal for themselves. The system which suffices to prepare girls and boys to enter secondary schools and take scholarships for training colleges, and even for the universities, ought to turn out good probationers, but the great evil of elementary education is that it stops short at the most critical moment in the development. However satisfactorily examinations may have been passed at the age of fourteen or fifteen, the woman who has not received any consecutive instruction since is not in a very good position at the age of twenty-two or twenty-three for acquiring the elements of a science such as physiology, with which she is altogether unfamiliar. The extent to which knowledge fades when not constantly exercised is well known to all who have ever taught. Allow seven years during which the only mental training has been listening to sermons, or reading penny novelettes, and the habit of consecutive thought, and of concentrated attention, with the power of accurate expression on paper, will probably have become much impaired. These are the causes which induce matrons to invite

the application of "well educated" probationers, meaning, not probationers who have attended any particular kind of school, but probationers who have continued their studies to an age when it is more likely that a permanent impression has been made on them.

It is becoming one of the most pressing problems of the nursing world how to secure the best class of women for hospital training. The hospitals are under grave disadvantages in their search for good material. Owing to the age at which it is found advisable to receive probationers, they are dependent first on the leisured classes, who can never furnish sufficient material; and, secondly, on the wastage from other professions. It is not a satisfactory position of affairs. It is a question whether some effort should not be made to induce the educational authorities to cater for the requirements of the hospitals in their evening continuation schools. Girls often make up their minds to become nurses long before there is any possibility of commencing training in any well-equipped hospital. Could not the opportunity be given them in special courses of study to prepare themselves beforehand for the studies they will be required to master when they begin their systematic training? The County Councils have shown themselves ready to meet the case so far as they can appreciate the need. They are only too anxious to spread a knowledge of home nursing among the senior scholars, and to provide lecturers on nursing subjects for mothers of families. But they have never had the need brought before them of preparing the ground for the instruction to be given in the training schools. Lectures on nursing are worse than useless for girls who want to become probationers. But classes on the construction of the human frame, on the elements of hygiene, and on elementary cookery would prove the best possible introduction to the probationer's course, and we feel sure that the County Councils would follow the lead of any hospital authorities who would take the trouble to indicate what they want from candidates. It is a little hard on the candidate who wishes to procure training to be told that the passport to it is a "good education" and to leave the standard wholly nebulous. Suppose a woman wants to become a nurse who is well aware that she has not had what any reasonable person would be justified in calling a good education, might she not be given the chance of making up for deficiencies? When all is undefined the most worthy may be discouraged out of sheer humility, and the self-satisfied candidate may succeed by pertinacity. We should like to see a preliminary course of evening instruction open to women who want to qualify for probationerships in every large town, by means of which those whose education stopped short too early could rub up their scholarship, and the first tremendous difficulties in the way of mastering unfamiliar studies could be overcome.

But in order to make such instruction really useful co-operation between the hospitals and the County Councils is essential.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK MAY 10 TO MAY 14.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 5.15 p.m.

May 10, Dr. T. D. Savill, *Treatment of Neurasthenia.*

May 11, Mr. Thomson Walker, *Diagnosis and Treatment of Malignant Disease of the Bladder.*

May 12, Dr. C. O. Hawthorne, *The Scope and Purpose of the British Pharmacopœia.*

May 13, Dr. F. J. Wethered, *The Treatment of Chronic Heart Disease, especially by Mechanical Methods.*

THE THROAT HOSPITAL, Golden Square, W.

At 5.30 p.m.

May 10, Mr. Parker, *Examination of the Ear and Hearing Powers.*

May 13, Mr. Parker, *Affections of the External Auditory Canal.*

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

May 13, Mr. W. Edmunds, *Knots, Ligatures, and Sutures.*

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

May 10 and 13, Surgical Registrar, *Demonstration.*

May 14, Medical Registrar, *Demonstration.*

At 12 noon.

May 10, Dr. Bernstein, *Pathological Demonstration.*

At 12.15 p.m.

May 12 and 15, Dr. Pritchard, *Practical Medicine.*

At 5 p.m.

May 10 and 13, Dr. Davis, *Diseases of Throat, Nose, and Ear.*

May 11, Dr. Moullin, *Gynæcology.*

May 12, Dr. Beddard, *Medicine—I.*

May 14, Dr. Low, *Plague.*

THE DEATH RATE FOR THE FIRST QUARTER.

A FEW observations suggested by the Death Rate Diagram for the first quarter of the current year, which we published last week, may not be out of place in the present issue.

The year 1909 opened well from a health point of view, and for several weeks was full of promise. Following upon one of the healthiest years on record, the month of January sustained to the full the highly satisfactory vital statistics of 1908.

The death-rate of the great towns in February did not exceed the septennial average, but with March a marked

excess over the mean rate was to be observed. The mortality during the last month of the quarter was so high, in fact, as more than to compensate for the saving effected during January and February, and the second quarter of the year thus starts with the mean annual death-rate materially below that of the current year.

The March mortality was considerably augmented by the prevalence of influenza. It is not the diseases of high fatality which swell the death-rate so much as those of widespread prevalence. Measles, whooping-cough, zymotic diarrhoea, influenza, have none of them a high degree of fatality. They are, comparatively speaking, and in the great majority of persons attacked, trivial affections, in which the question of danger to life barely arises; yet because of the large number of susceptible persons, and among them the high degree of probability of attack, large numbers of the population are seized in times of epidemic prevalence. And an extensive morbidity of this sort counts for more in the mortality bills than does the lesser prevalence of more serious affections.

When influenza is epidemic comparatively few people escape wholly the incidence of the disease. It may be a passing lumbago, a transient headache, a twinge of muscular rheumatism, an indefinable sense of malaise that alone betrays the presence of the infection, but the universal diffusion of the poison exposes the weak places in which may be styled the communal resistance, and this is expressed in a mortality-rate such as is exhibited above in the curve for March of the 76 great towns.

Superimposed upon the normal mortality, deaths from the commonly recurring epidemics of minor diseases disturb the seasonal curve and lend to particular years those undesirable features represented in steep ascents and towering pinnacles which are the sport of agencies not yet within the grip of preventive control.

IN the University of Oxford on May 4, the congregation approved a statute which had been proposed for the establishment of a Diploma in Ophthalmology.

THE next session of the General Medical Council will commence on Tuesday, May 25. The President, Principal Sir Donald MacAlister, K.C.B., will take the chair at 2 P.M.

THE President and Council of the Medical Society of London will give a conversazione at the Society's rooms at 11 Chandos Street, W., on Monday, May 17. There will be a reception by the President at 8.30 p.m., and at 9 p.m. an oration by Dr. H. D. Rolleston on the Classification and Nomenclature of Diseases, with remarks on Diseases due to Treatment.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For LIVER COMPLAINTS, OBESITY, &c.

The "VIENNA MEDICAL PRESS" says:—

"Hunyadi János may be regarded as a specific for obesity."

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 115, VOL. V. [No. 1187, VOL. XLVI.]

SATURDAY, MAY 15, 1909.

THE EARLY DIAGNOSIS OF UTERINE CANCER.

WE owe it to the courtesy of the Editor of the *British Medical Journal*, who has forwarded advance proofs, that we are enabled this week to print in outline the report of the Committee appointed by the British Medical Association to consider how best to secure the earlier diagnosis and treatment of uterine cancer. The report contains two appeals which it is desired to circulate as widely as possible—one to members of the medical profession, the other to midwives and nurses. The first of these two is very much the longer, and is, in fact, a *résumé* of the pathology, symptoms, and signs of malignant disease of the uterus. It is drawn up with great care, and it is very well worthy of the closest study by everyone whose advice is ever asked by women about their health, whether he be a general practitioner, a gynaecologist, or a specialist in any other branch of medicine or surgery.

On reading through this document, among the first impressions gained is one almost of humiliation that it should be necessary in the twentieth century to point out to qualified men their bounden duty to make a physical examination of those of their patients whose symptoms are suggestive of malignant disease. It is not to be doubted that the members of the committee felt strongly the importance of overcoming the laxity which it is to be admitted does exist in the profession with regard to this matter. In point of fact, the whole attitude of the surgeon towards malignant disease of all kinds, not of the uterus alone, has been changing rapidly of late years. The routine use of the microscope in diagnosis, the steady progress in surgical technique, and the resulting greatly improved ultimate results of operation are practically the product of the last decade or so; and the very remarkable success which now attends operation on early cases serves by contrast to illuminate the still dismal record of those in which the disease has gone too long unchecked. The cry of the surgeon is for early cases, and for the education of the practitioner in detecting them and advising operation. For all that it is still true that even now many of our standard text-books contain descriptions of malignant disease in various situations which are essentially pictures of advanced cases. Cachexia, palpably enlarged glands, fixity of the growth, dimpling of the skin, and many

other signs are still given in surgical works as points to be observed in the differential diagnosis of cancerous tumours. It is on the earliest, not the latest, signs that stress should be laid; the object aimed at should be the diagnosis, not of a tumour which is indisputably malignant, but of one to be reasonably regarded with suspicion sufficient to justify its exploration or its submission to the microscope of the pathologist.

Granted, then, that just at present the diagnosis of malignant disease is, to a certain extent, a reproach to the profession, though beyond question less so every year. The situation must clearly be amended. The expert in fevers who sees a faucial inflammation of suspicious aspect does not wait until he has cultivated the bacillus diphtheriæ before injecting antitoxin; why should the medical man confronted by a symptom possibly due to a much more terrible disease—carcinoma of the uterus—refrain from diagnosis and treatment until the first is obvious and the second impossible? The answer, of course, is that his patients are not so enthusiastic about a pelvic examination as of an inspection of their fauces; at least, no other of any weight suggests itself. Now this objection, due to quite natural feminine reluctance, is at best an excuse, not a valid reason; and the doctor who knows that he ought to make a vaginal examination but refrains from doing so on this ground is one whose failure of an obvious duty might well be described in very harsh terms. Moreover, as the memorandum of the British Medical Association's Committee points out, a frank explanation of the conscientious necessity which compels the step in question will almost always suffice to remove the objection felt or expressed.

So much, then, for the improved education of the medical profession, which the publication of the report will, we feel sure, do much to promote. There remain two other important factors—one the education of the public itself, the other that of midwives and nurses, who are so often taken into confidence long before any appeal is made to a medical man or woman. With the education of the public the present report does not deal, but it may be remarked that it is of importance subsidiary to that of midwives and doctors. Already it is very noticeable how much

less the fear of "the knife" permeates the lay population than it formerly did—a natural consequence of the advances made in surgery during the last generation. The appeal issued to nurses and midwives is most commendably brief and pointed, as it must be if it is to impress itself firmly on the minds of those to whom it is addressed. If there is one point connected with these excellent memoranda which is in the least degree capable of improvement, it is the arrangement which places first among the early signs of cancer of the womb "*Bleeding*, which occurs after the change of life." It is true that No. 3 explains that intermenstrual bleeding in

younger women is also of importance; but experience proves that to start off with the statement we have quoted may by many be too hastily interpreted into a significance quite erroneous, to the effect that hæmorrhage before the menopause is of no consequence. The emphasis laid on the paragraph which impresses on those to whom it is addressed that pain, wasting, foul discharge, and profuse bleeding are often all four absent in cases of cancer still in the curable stage, is not a whit too great. The dissemination of this appeal throughout the medical and nursing Press is a project which must have the best wishes of everyone who is interested in the crusade against cancer.

PUBLICATIONS OF THE RESEARCH DEFENCE SOCIETY.

THE Research Defence Society has now published, in an attractive volume* of small size, a selection from the pamphlets and other publications which were issued in the course of its first year's campaign of public enlightenment. This book may well be considered one of the most useful and important weapons which the Society has yet unsheathed for the destruction of the enemies of experimental science. The Committee very wisely decided that in the selection of these essays and papers all purely controversial matter should be excluded. This course has not in the least degree blunted the edge of the blade, and has indeed added to its general efficiency. Of the twelve papers included in the present volume, four are of recent date, and have not previously been sent out to members of the Society and to applicants for information; they are by no means the least cogent of the various expositions of the true facts and principles upon which the Society bases its defence of animal experimentation as conducted in these islands at the present time. But each of these selections from the Society's literature more than justifies its inclusion, and each strengthens the arguments of the others. Constant organised effort is only too clearly needed, if the forces of wilful misrepresentation and of well-meaning but ignorant sentimentalism are to be overcome. The latter are more dangerous even than the former: honesty and credulity, combined in the cause of emotional humanitarianism, and egged on by lurid tales and distorted figures—have it in their power to undermine the noblest efforts of science and of true humanity. The only method of defence is now known to be the patient sowing of plain facts and broad simple principles. Science must stoop from its high endeavours to answer the questions of the dull, the suspicious, and the uninstructed, and must not resent the demand for an explanation in outline

of its motives and its methods. These things being now understood and accepted, mainly through the labours of the Research Defence Society, the harvest of mutual confidence and support will some day follow. To this end the present volume has been compiled, and no medical man should fail to provide himself with such useful means of answering the questions of his patients and friends. As we have said before, when discussing the subject of vivisection and anti-vivisectionists, the medical profession as well as scientific workers owes to the public—and not only to the educated sections of the public but to all inquirers—something more than mere *ex cathedra* assertions of the need and use of animal experiments. In order to dispel the well-nourished suspicion which lurks in the minds of too many lay persons, that doctors support vivisection out of loyalty to their profession and their teachers, and blind themselves or are unwittingly blind to the evils of the practice, definite facts and figures prepared for popular comprehension are essential. We hope to deal further and in more detail with some of the more striking and effective contents of this volume; but in the meantime we may point to Professor Starling's admirable paper on "The Use of Dogs in Experiments" as exactly suited to clear the public mind of some of its most painful misapprehensions. Even the most convinced partisan must feel shaken in his beliefs in the face of the statement, from a scientist of unimpeachable honour whose veracity has actually been endorsed by a lay jury, that, in 17 years of experimental work, he has never once seen pain inflicted on cat or dog in a British physiological laboratory. Professor Cushman's paper also, which reveals the immense practical value of experiments on animals to medical treatment, cannot fail, by its lucidity, and by its obvious truth to the spirit and the fact, to disperse popular doubts and misconceptions. Lord Justice Fletcher Moulton's remarkable Evidence is wisely reprinted in this collection; but space compels us for the moment to take leave of the Society's first book; and we must close with the repeated advice to our readers to buy it and read it for themselves.

* *Publications of the Research Defence Society, 1908-1909.* London: Macmillan and Co. Pp. 216. Price 2s. 6d. net (or to members at cost price, 1s. 8d. post free, from the Secretary, 70 Harley Street, W.)

ANNOTATIONS.

Tubercle Bacilli in the Blood.

LESS than three months ago a paper appeared in one of the most influential and widely circulated trans-Atlantic medical journals, whose author claimed to be able to demonstrate tubercle bacilli in films of blood taken from patients suffering from tuberculosis. This bacteriæmia he believed to occur not only in generalised miliary tuberculosis, but in all cases of localised active disease. Upon the face of it such a discovery has bearings whose importance can scarcely be overestimated—a sure and certain method of diagnosis so simple, so painless, so devoid of possible ill-effects would revolutionise existing methods completely. Nor is there anything essentially incredible about the possibility. Tubercle bacilli must obviously sometimes be circulating in the blood, even during health; so that no hypothetical reason exists why they should not constantly do so when an active manufactory exists somewhere in the body. The point that requires elucidation, however, is whether tubercle bacilli can actually always be found in the blood-stream; whether as a fact their detection is always possible in a tuberculous patient. Upon this very definite question it would seem, according to yet another American journal of the highest repute, that the original investigator who committed himself to a positive answer is wrong. At two large New York hospitals special investigations have been made, the result of which is absolutely to negative that contention; and some very sweeping criticisms are passed upon the unscientific way in which the original experiments were conducted. There can be no valid reason why similar control investigations should not be made in this country; and such independent research would have the added value of being quite free from any possible imputations of professional jealousy, as well as tending to decide finally a point of the most far-reaching importance.

Chlorodyne and the Poison Schedule.

NOTWITHSTANDING the care with which the Poisons and Pharmacy Bill was discussed before it became law, it seems that there are still possibilities for persons to obtain poisonous quantities of certain drugs without infringing the Act. This has been brought out by a recent inquest, held by the City Coroner, Dr. F. J. Waldo, concerning the death of Emily Landsell, aged 43, the wife of a publican. It is true that the jury returned a verdict of "Accidental Death," but it seems equally true that death was caused by chlorodyne poisoning. According to the evidence, Mrs. Landsell was found dead in bed, and it was stated that she was in the habit of taking chlorodyne in order to induce sleep. One doctor said that death was due to heart failure, accelerated by alcoholism; but the police divisional surgeon attributed death to chlorodyne poisoning. Owing to this difference of medical opinion, expert toxicological evidence was sought from Dr. Womack, who pronounced for morphine poisoning, probably due to the woman having taken about half an ounce of chlorodyne, which would contain, it seems, about one grain of morphine. It would appear that chemists have

received notice that they are not obliged to request purchasers of chlorodyne to sign the poisons book, as that medicine does not come within Part I. of the Poisons Schedule. Seeing, therefore, that chlorodyne may cause death, it is a matter of some importance for medical men to know how it escapes the Act of 1908, especially as it appears that chlorodyne may sometimes contain another poison besides morphine—namely hydrocyanic or prussic acid, though in some similar preparations this is replaced by tincture of capsicum. Under the new Act 0.1 per cent. of prussic acid or more brings preparations containing it under Part I. of the Schedule. The morphine in a mixture must reach 1 per cent. for that mixture to come under Part I. of the Schedule. The chlorodyne in question in the case of Emily Landsell contained, we are told, only 1 grain of morphine in 4 drachms, and thus, though fatal in its effects, it entirely escaped the Act.

Art and Morals.

In a letter recently contributed to a lay contemporary a lady complained of the "great injustice" which was contemplated by those who were attempting to raise thousands of pounds to buy the Duke of Norfolk's Holbein, while St. Bartholomew's Hospital is unable to pay its way. "Surely," she says, "the Government would do more good to help obtain medical and surgical attendance for the poor than buy a picture which, at the very best, would only give enjoyment to a limited number." We confess ourselves in general agreement with the correspondent, in the limited sense that the proposed contribution of the State seems totally disproportionate in amount to the degree of satisfaction, or moral improvement, which is likely to accrue to the public from the expenditure. It is a *bourgeois* admission, and we lay ourselves open to the scorn of æsthetes; yet many will be bound to agree that there is a deal of clap-trap talked about the elevating influence of old masters: clap-trap we say, because the mere technical beauties of first-rate paintings are unappreciable by an infinite majority, and no amount of "high-falutin'" will alter the fact. It is not as though the picture in question speaks any lesson of patriotism, raises any historic memories of which we are proud, or inspires any exaltation of morals. It is a portrait of a woman, executed by a foreigner long dead, and of no conceivable advantage to the nation except as a museum specimen of mastery in technical art. Naturally, from a sentimental point of view, it is gratifying to this country to possess a fine museum of such things, but one feels less prepared for a sacrifice with such an object in view than one would be were the object a real "elevation" of the people such as we hear so much about. Touching the alternative suggested by the writer of the letter, we prefer to keep an open mind. It may be that State support of hospitals will be needed in the future, but it is not yet so needed owing to the amazing charity of our public, and we do not doubt that St. Bartholomew's Hospital will weather its temporary embarrassments without it.

MEDICAL OPINION AND MOVEMENT.

THE Treatment of Nocturnal Enuresis by Thyroid Extract has been tested by Dr. Leonard Williams, who publishes a series of 25 cases in the *Lancet*. He was led to try this remedy by the entire failure of the usual measures in the case of a public schoolboy who would have been obliged to leave his school if the trouble had continued. On this patient circumcision had been performed in infancy, and a small collection of adenoids was removed by a specialist: so neither phimosis nor nasal obstruction could be held accountable for the enuresis. In fact, after the operation for adenoids the nocturnal discharge of urine became very much more frequent. This suggested to Dr. Williams that the removal of a mass of adenoid tissue had deprived the lad of something which counteracted the abnormal condition of the nervous system causing sphincter relaxation. So on the possibility that the most similar tissue known, that of the thyroid gland, might restore the lost balance, he ordered thyroid gland extract, with results apparently magical. The boy, it is to be added, showed no signs either of hyperthyroidism or cretinism, though he was somewhat below the average height and weight for his age. Having achieved such striking success, Dr. Williams proceeded to investigate an extended series of hospital cases, with results equally satisfactory. Only one of his 25 patients obtained no benefit from the treatment, though not all were cured with the suddenness and completeness of the public-school boy. On searching the literature very carefully for previous investigations on this subject, Dr. Williams came across only one allusion to the value of thyroid medication of enuresis, that of a Belgian physician. Considering the refractory nature of this complaint to the hitherto accepted lines of treatment, the series now reported is one in which all practitioners must be interested, and further results along these lines will be eagerly awaited.

SOME interesting remarks on Scurvy are contained in a paper recently published by Dr. G. A. Turner, medical officer to the Witwatersrand Native Labour Association. The subject under consideration is the diet of South African native races in their own kraals, and after noting the extraordinary powers of endurance of many tribes on apparently most inadequate diet, the author remarks that if after such privation they are given severe muscular labour on a full and highly nutritious dietary, they seem to be especially prone to contract scurvy. This peculiar sequence has been observed amongst the Maherero, who flocked to the Rand after the uprising against the German authorities in Damaraland; in natives from Bechuanaland at Kimberley after the campaign in that country; after the Matabele rebellions, and so on. An interesting point is that when scurvy thus occurs, lime juice seems to have little or no curative effect upon it. It is pointed out that the negro in these circumstances has been deprived especially of proteids, whereas the sailor on board ship may have had sufficient or even too much proteid in his food,

but not enough vegetable salts. Bearing this in mind, it is interesting to recall that on Capt. Robert Scott's Antarctic expedition five or six years ago such cases of mild scurvy as occurred reacted much more satisfactorily to the provision of fresh seal meat than to any system of lime or other vegetable therapy. Dr. Turner, curiously enough, has himself noticed that the best treatment of the scorbutic natives he has had under care is to add raw meat to the soup which they are given. The question of the exact causation and treatment of scurvy is one in which little progress has been made of late years, largely owing to the success with which prophylaxis has prevented this once common disorder.

"THE Cure of Typhoid" is the somewhat startling title of a paper by Mr. J. Maberly in the *Transvaal Medical Journal*. After pointing out that the present expectant treatment of typhoid fever is analogous to that of acute rheumatism before the introduction of salicylate compounds, and that there is, therefore, no *a priori* objection to the empirical use of any new drug, he proceeds to give his experience with tincture of monsonia biflora, and with an active principle which has been isolated from it and named entericin. It is claimed for the tincture that it is particularly valuable for hæmorrhage in typhoid fever, and for any case in which distension or profuse diarrhoea suggest the possible imminence of that complication. The action of this drug in doses up to three drachms two-hourly is regarded both by the author and by Dr. Darley-Hartley as practically specific. The great objection which is found to militate against the use of monsonia as a routine part of the treatment of typhoid fever patients is its markedly constipating effect. To get over this objection the aid of analytical chemists was invoked, and a body has been isolated of stable but indefinite composition which is believed to contain the active principle without any constipating action. As a result of a somewhat limited experience since this body was isolated, Mr. Maberly has strong hopes that he has solved the problem of the curative treatment of typhoid; for he suggests tentatively that entericin has an antidotal action on the typhoid toxin itself, as well as some specific effect upon the actual ulcers. It is to be noted that the four published cases were all of fairly severe type, that the fever subsided rapidly and permanently in each case, and that a much more liberal dietary was ordered than is usually allowed in this country.

AN interesting discussion took place at a recent meeting of the Medical Society of Paris on the Pathology and Treatment of Neurasthenia. Dr. Godleski sought to define clearly and distinguish neurasthenia from other neuropathic conditions with which it is often confounded. True neurasthenia, he maintained, is always due to an intoxication produced either by physical, intellectual, or especially moral fatigue, or by some previous malady of an infective nature. This intoxication leads to nutritive disturbances of the cells of the

body, and especially of the nervous system. Hence the rational treatment of neurasthenia should be directed towards a disintoxication and reconstitution of the cells. He did not deny the mental or psychical factor involved in the disease, but the weakening of volition is only a result of the physical morbid condition. Psycho-therapy, persuasion, re-education of the will are of value, but they can only be regarded as complementary, and do not form the basis of rational treatment.

AN instance of Gastric Ulcer caused by Needles in the stomach is reported by Fuld and Katzenstein. A young girl in good health had swallowed by mistake some needles she had in her mouth. Two months later she consulted Dr. Fuld on account of gastric pain, and he detected a circumscribed sensitive area in the pyloric region on deep palpation. Radiographic examination revealed nothing, but as the pain persisted in spite of treatment, operation was determined upon. Katzenstein discovered on opening the stomach two needles placed at an angle of forty-five degrees to each other, about four centimetres from the pylorus. There was some thickening around, and in the centre a granulating ulcer. A third needle was also found embedded in the muscular coat. The only indication of its presence was a longitudinal cicatrix in the mucous membrane. Having removed the needles Katzenstein scraped the granulating surface and covered it with normal mucous membrane. The patient recovered completely, and had no recurrence of pain.

DR. G. AUZILOTTI, of Pisa, advocates the intramuscular injections of Gelatin combined with Chloride of Calcium, as a means of assisting ossification in cases of Fracture with delayed consolidation, chronic osteo-myelitis and pseudo-arthritis. He uses a 2.5 per cent. sterilised solution of gelatin with .75 per cent. sodium chloride, .5 per cent. phenol, and .5 to 1 per cent. of calcium chloride. He injects 10 c.c. of this solution every day or every other day into the muscles of the buttock. He has carried out the treatment in a large number of cases, and is convinced of its efficacy in favouring the processes of osseous repair. The injections are quite harmless, and cause no local reaction. The method was first used by Dr. V. Colla in a case of general osteo-malacia with multiple fractures. The condition appeared to be ameliorated by the treatment, and there was reunion of the fractures. Gelatin is known to cause an increase in the coagulability of the blood, but whether there is any connection between this phenomenon and the formation of osseous tissue, or what the underlying physiological processes are by which the gelatin is able to influence the process of bone repair have not hitherto been explained.

IN *Le Progrès Médical*, Dr. G. Milian discusses the value of the Corneal Reflex in cases of coma of doubtful origin. In such cases the question often presents itself whether the coma is due to an intoxication, a cerebral lesion, or whether it is a post-epileptic coma, or a coma of hysterical origin. The condition of the corneal reflex will generally give a de-

cisive answer. In cases of extreme intoxication it may be very feeble or absent, but it will be the same on both sides, although the author makes the interesting observation that in cases of narcosis from chloroform, careful observation will reveal the fact that the corneal reflex will disappear from one side first. In cases of hemiplegia, however, the corneal reflex is abolished only on the paralysed side, and similarly in Jacksonian epilepsy there may be absence of the corneal reflex only on the side on which the convulsions appear, to be followed by abolition of both reflexes when the convulsions become generalised. This may afford an important diagnostic sign in the differentiation of Jacksonian epilepsy from hysterical convulsions or true epilepsy. The author cites an interesting case of a woman addicted to morphia injections in large doses, who became suddenly comatose, and the diagnosis of morphia intoxication was made. The author, however, observed a marked immobility and inertness of the limbs of the left side of the body compared with the right. Babinski's sign was indecisive, and the knee-jerks were present on both sides, but there was complete absence of the corneal reflex on the left side, and this enabled him to make a definite diagnosis of hemiplegia.

THE Appendices Epiploicæ play a by no means unimportant rôle in abdominal pathology. They may produce internal strangulation, they may themselves become strangled in herniæ and they may become detached as a result of previous torsion, and form foreign bodies in the peritoneal cavity. Torsion of the appendices is the most common form of accident observed, but this has hitherto always been of a chronic nature. Dr. H. Zöppritz, of Kiel, however, reports a case of acute primary torsion of an appendix epiploica which was verified and relieved by operation. The patient, a young man, had for some time suffered from abdominal cramps more or less intense on certain movements of the body. One night he was seized suddenly with extremely acute pain just above the umbilicus. The pain persisted during the following day, and was accompanied by some prostration. There was some resistance of the abdominal wall over the painful region. The temperature was slightly raised, pulse 96, and good, and no nausea or vomiting. Operation was resorted to, and the usual incision for appendicectomy was performed, but the appendix was found to be quite healthy, but on carrying the incision higher up, a small bluish-red mass was discovered, surrounding adhesions were detached, and a little tumour of the size of a prune presented itself as an appendix epiploica of the transverse colon, twisted on its pedicle to an angle of 180 degrees. This was ligatured and resected and the patient was cured.

KUTTNER has recently published an account of a series of 21 Thoracic Operations performed by himself in a Chamber in which the Atmospheric Pressure can be Raised or Lowered at will. Under diminished pressure he operated on 17 cases, including cases of bronchiectasis, traumatic pul-

monary hæmorrhage, aneurysm, cancer, and sarcoma, both of the pleura and the lung, as well as tumours of the thoracic wall. Four cases were operated upon under increased pressure. The author finds that as the result of operating under such conditions exploratory thoracotomy is no more dangerous nor difficult than exploratory laparotomy. The use of such a chamber abolishes all risks of sudden dyspnoea, collapse, and the other unforeseen dangers which so frequently accompany extensive intra-thoracic operations. Even with an opening in the thorax of 20 centimetres and more, as is necessary in operations on the œsophagus, no change in the patient's condition can be observed. The author used Sauerbruch's and Brauer's apparatus of diminished and increased pressure respectively. He recommends that ether be used as the anæsthetic which he finds in no way dangerous. The patient should from time to time be allowed to respire a little oxygen given under pressure.

BABONNEIX and Bernard contribute an interesting study of the Ocular Manifestations of Chorea to the *Gazette des Hôpitaux*. Iritis has only once been recorded. Conjunctival anæsthesia is, however, fairly common; but, as Babinzki has shown, this must be attributed to involuntary suggestion on the part of the medical attendant. Pupillary symptoms are familiar to modern observers. Cadet has since recorded a striking case of choreiform movements of the iris, and Cruchet has called attention to the alternations of mydriasis and myosis often seen in chorea. The present authors, however, regard this symptom as inconstant and of no importance in the differential diagnosis between chorea and the various tics. Optic neuritis has been noted on several occasions, more especially by Bouchut, who attributes it to hyperæmia; but the suggestion has been advanced that the associated optic neuritis and choreic symptoms are both due to a meningitis. It has often been stated that the paralyses sometimes seen in chorea invariably spare the ocular muscles, and the authors cannot find a single instance of ocular paralysis in the literature of this subject.

VAN STOCKUM, in the *Zentralblatt für Chirurgie*, publishes two cases of Suprapubic Prostatectomy successfully performed without opening the bladder. His method is as follows: After making an incision above the pubes and cutting down on to the anterior wall of the bladder, this latter is carefully separated from the posterior surface of the pubic symphysis. This having been done, the retro-pubic tissues are stripped off the anterior surface of the prostate, and each lobe of the organ enucleated separately, after opening up the capsule by a vertical incision a little to one side of the middle line. Whilst enucleation is proceeding, an assistant, by means of a finger in the rectum, pushes the organ well forward. A catheter is next passed into the bladder and tied into position. A gauze plug is then put into the prostatic cavity, and a drainage tube inserted into the suprapubic wound. The author is of opinion, however, that the drainage tube is really unnecessary, and proposes for the future to sew up the wound, leaving only a small opening through

which the end of the gauze plug is brought to the surface. The catheter is left in for about a fortnight. The author claims that this operation causes less damage to the tissues than that of Freyer, and reduces hæmorrhage to a minimum.

GILBERT BALLET, in a paper read before L'Académie de Médecine, is of opinion that the belief that the descendants of general paralytics are afflicted with a psychopathic or neurapathic taint is erroneous. An analysis of fifty cases of children of general paralytics, taken indiscriminately at ages from fifteen to thirty, only shows seven cases in which there was nervous or psychical derangement. Of these seven, two were epileptics, two were attacked with a psychosis of a doubtful nature, and three were extremely impressionable and emotional. From this, the author is led to believe that general paralysis is a disease of the nervous system only in so far as it has its seat therein and not by nature. Among the children of general paralytics nervous affections are the more common, the more frequently the children are born at a period long antecedent to the onset of the disease in the parent, which is to say, at a period nearer the initial syphilis of the parent. The nervous taint in such children is thus the direct outcome of hereditary syphilis, a fact which is well shown in certain cases of epilepsy, which seem to result from a specific meningitis in early childhood.

RECENT work by Roger suggests that, contrary to the general view, peptones do not represent the ultimate stage in the digestion of albumins. The substances absorbed by the organism, according to him, are not peptones, but bodies which fail to give the biuret reaction. He has experimented with finely minced muscle, added to water containing sulphuric acid, and kept at a temperature of 120° C. for 20 hours. With a 1-per-cent. solution of acid a part of the albumin is converted into peptone, and a much greater proportion of the albumin is transformed by a 2-per-cent. solution. If a 15-per-cent. solution be used, only abiuretic substances remain. It is interesting to note that the toxicity of these solutions varies directly as their content in peptones, which can be shown by injection into animals of the solutions after freeing them from acid by baryta and then filtering them. Peptones have the power of diminishing the blood-pressure, and it is interesting to note that in proportion as the solutions contain less peptone, so is their effect on the blood-pressure lessened, and a solution containing abiuretic substances only has no effect at all. Thus is explained the paradox of the toxicity of the absorbed products. Peptones which are toxic are not absorbed as such, but are turned into abiuretic bodies which are not toxic. Moreover, this fact explains also an observation formerly made by the same author and Garnier, who showed that the material contained in the duodenum is much more toxic than that contained in the lower part of the ileum, a fact which is explained by the gradual disappearance of the peptones as the chyme travels down the small intestine from the duodenum.

HOSPITAL CLINICS.

THE TREATMENT OF CONSTIPATION.

By SEYMOUR TAYLOR, M.D., F.R.C.P.; Physician to the West London Hospital.

(Abstract of a lecture delivered at the West London Post-Graduate College.)

WHEN I started to prepare this lecture I consulted a large number of authorities, but I could learn very little that is new, and it occurred to me that it might be better if I spoke to you of my own experience rather than gave you a *résumé* of other people's work.

To offer, first of all, a definition of constipation, we may say it is a disorder, usually functional, in which a daily relief of the bowels is not naturally obtained. I use the term "functional" so as to exclude gross lesions of the intestine which may be the cause of actual obstruction.

ÆTIOLOGICAL FACTORS.

As to causation, remember that heredity is a marked feature in some families. Constipation may exist in some members of a family and be absent in others. I know a family of five in which three are habitually constipated, the others not; and another family of two, one of whom has this trouble, the other just the reverse. And yet the environment and food of the members of these families respectively are identical. In many families the various children differ as they favour one or other progenitor who may suffer from this disorder. I know some children in whom the father's or the mother's characteristics are reproduced.

Girls sometimes favour their father in feature, voice, and in other respects, and suffer also from constipation if he does. Boys, again, may resemble their mother in the same tendency, as well as in physical characters. In other families, again, heredity being a well-established fact, all the members may suffer from constipation when both parents are affected.

We must admit, therefore, that in some people constipation is a matter independent of food, drink, habits, and environment. I know of three generations in one family thus affected in which father, son, and grand-daughter have had to take regularly a dinner pill prescribed originally for the former by a celebrated physician; the girl is now about 17 years of age.

THE PENALTY OF CIVILISATION.

But we must also admit that in most cases constipation is a penalty of our advanced civilisation. The lower animals in a state of freedom do not suffer from constipation, but when kept in confinement they may do so, and one of the keepers at the Zoo tells me that the lions defæcate on the average but once in four days. Further, amongst nomadic people, gipsies, tramps, showmen, and so on, I find by inquiry that this disorder is comparatively unknown. Those people who enjoy a scanty, but sufficient, dietary suffer less from constipation than do more prosperous folk, who, as a rule, overeat themselves.

As showing the prevalence of constipation, I need only refer to the advertisements seen everywhere in

which quack remedies are extolled. I think anyone coming into this country would be justified in concluding that the majority of the inhabitants must be suffering from this condition; and as far as the females are concerned I think he would be right. I estimate that in our urban population 60 per cent. of the women suffer from constipation.

THE FACTORS OF SEX AND MODESTY.

What are the causes of this? The first is habit—indifference to a daily evacuation. It is wonderful what a little discomfort some people suffer from it. They say they keep in good health, feel well, have no headache nor indigestion, although they frequently go five days without an action of the bowels. Another factor, in women especially, is carelessness. Unless prompted by a desire to evacuate, there is no self-inquiry as to whether it is necessary to have an evacuation or not. That is so in women, whereas their husbands or brothers are not careless and indifferent in this way. The latter do not think of starting off for business until they have emptied the bowel, because they know that they will suffer if they do. Another cause is a sense of false modesty or shyness in being seen going to the closet. I do not want to appear gross, but this is a very important factor which you must recognise, and of which you should warn the mother of a family of growing daughters. Such shyness does not obtain on the Continent. I am not sure that I do not admire the shy English girl rather than her sisters on the other side of the Channel; but be that as it may, this shyness is one of the causes of habitual constipation. I have had to speak of this to ladies who have told me that they do not like to be seen going into a closet even by a housemaid who may be dusting the stairs. They will, even when they have a closet on their own landing close to their bedroom, postpone the act because someone (of their own sex) is about. Such procrastination is fatal; the moisture of the fæces is reabsorbed into the system, and a hard mass is formed and retained.

DIET AND CONSTIPATION.

The next heading of the subject is diet. The man or woman whose food is too much in quantity or too rich in quality gets an over-distended bowel which becomes sluggish. The rich man who eats a superabundance of food suffers from constipation. The woman who marries a rich man may hitherto have lived sparingly; but she gets into the habit of eating a big lunch and a rich tea of buttered toast and cakes, and then gets a fictitious appetite for an indigestible dinner by driving round the Park.

Another cause of constipation is an excess of butchers' meat, which is rich in nitrogenous products and poor in refuse. Much of it is absorbed, and but little remains to stimulate peristalsis. On the other hand, vegetables and vegetable foods may

be too scanty in our allowance, with a like result. Another article of diet which must be mentioned is milk, particularly in children. Small quantities of milk sipped or cooked in milk puddings do no harm; but the anxious mother who allows her child to go to the larder the moment he comes in and gulp down milk is promoting constipation in him. Then, too, food which is too well ground or too well prepared has the same tendency. Our bread, ground between steel rollers; our beefsteak, free from all gristle; the leg of mutton with the outside carefully cut off and left at the edge of the plate—all these tend to produce constipation, because these pieces of gristle and skin, though low in nutritive power, stimulate the bowel.

DIRECT CAUSES.

Those, gentlemen, are the predisposing causes of the costive habit. The direct causes come under the heads of secretion and the muscular apparatus. If you remember your physiology, bile is Nature's purge, and therefore those who have an inactive liver will suffer from constipation, and the stool in this case is pale in colour. In those who eat too small an amount of food, whether from choice or necessity, the bowel is not stimulated as it should be by the passage of food down its interior; muscular inactivity is thus a factor in such circumstances.

Suppose the secretions are diminished. This may be brought about by the absence of certain foods which ought normally to set up the production of these secretions; and the formation of gas in the intestines is an essential part of the cure of such cases. One of the reasons that vegetable food produces a lax condition of the bowel is that by decomposition it gives rise to certain gases which stimulate the intestine, not only to peristalsis, but also to increased secretion.

It is a well-known fact that fermented liquors such as beer and champagne will undoubtedly act as aperients to certain people. I know a man, the subject of the costive habit, who will not take aperients; when he gets constipated he goes to a certain restaurant and orders a simple meal and a pint of stout with it. After this he has to hurry home at once, because he knows that in an hour's time he will have an action as if he had taken a brisk purge. So much is this property of beer the fact that at Burton-on-Trent there is a popular saying, "Did you ever see a costive brewer?" This has passed into a proverb, because all the workmen from the highest to the lowest are allowed free a certain amount of beer a day.

THE FACTORS OF INSUFFICIENT FLUID.

The secretions, again, of the intestine may be insufficient because there is not enough food taken to stimulate the lower intestine—a point not recognised as it should be. Looped up to the stomach, but 18 feet or more away, is the transverse colon; and one of the reasons that a man has a desire to evacuate the bowels just after breakfast is that the food in the stomach stimulates the transverse colon so that evacuation results.

So it comes about that a man who is not well fed, and especially if he does not eat a proper breakfast, may gradually acquire the costive habit. I have

often thought about the reason why the transverse colon is looped to the stomach. One eats a bit of indigestible food, such as a piece of half-chewed apple; in less than a quarter of an hour there is intense colic, which is not relieved until the bowel is emptied both of fæces and flatulence. There is, in fact, a close reflex connection between the stomach and the transverse colon, for they have to a large extent the same blood supply and the same nervous supply. The effect of this connection is seen by the draught of warm water or tea taken in the early morning, which is very useful in preventing constipation. No one will persuade me that this fluid can possibly traverse, in three-quarters of an hour or so, the entire alimentary canal; the effect must be largely a reflex.

Constipation may be due to wasting of the involuntary muscles, as in fevers; or to wasting of the abdominal muscles, as in pendulous belly; or wasting may be brought on by the very disease which it has caused. The belly muscles suffer from inertia, and the man who takes no exercise suffers, of course, from constipation. You see that, too, in the lower animals; as soon as your dog is let out of doors he goes for a scamper, and in ten minutes the bowels are relieved.

Want of nerve energy is another cause of constipation. The indolent creature who loves his arm-chair suffers from want of nerve energy and constipation. On the other hand, the energetic man who rushes off for his train may lose the opportunity and not get his relief until the next day.

RATIONAL TREATMENT.

I must say a few words now as to the treatment of this disease, which in functional cases is perhaps not so much a disease as a disorder. Anyone can write a prescription for a purge; any chemist can do it excellently, and the daily Press is full of advertisements of patent remedies. But the best treatment is that which will overcome the trouble without the use of drugs.

Let the patient select some hour of the day, either morning or evening, when he can always have the opportunity to attempt to coax nature. If after breakfast is not convenient, the middle of the morning, or last thing before bed time will do as well. Tell him to go regularly every day at the same time. He must not sit and strain; but if after 10 minutes no action results let him give up the attempt and renew it next day at the same hour. After a few days it will be found that the bowel will get accustomed to keeping this appointment.

When building a house the closets should be made with a low seat. I do not want to go into offensive details, but it must be remembered that savage man in the natural attitude of defæcation squats with his chin on his knees and his abdomen pressed on by his thighs. Therefore the seat should shelve backwards, and you will be astonished not only at the ease with which evacuation is thus obtained, but also by the freedom and amount of it.

DRUGS IN CHRONIC CONSTIPATION.

I think it is a matter of little moment what drug you select; aloes is a constituent of most purges. One of the most successful patent medicines on the

market is one in which the purgative principle is present in very small quantity; thus the patient can take one or two or three or more pills according to his experience of what he requires. Whatever you give, let it be in small continued doses. If you like, order $\frac{1}{10}$ grain of calomel every night, followed by a saline aperient in the morning. Another favourite prescription of mine is $\frac{1}{2}$ grain of podophyllin every night for ten or twelve nights, combined always with a regular visit to the closet at a fixed time. Iridin and ononymin are also valuable, separately or combined; if you give these with podophyllin, $\frac{1}{4}$ grain of each will be enough.

Great advantage will accrue to the sufferer from constipation if you follow up this by advising one or two apples in the early morning; the malic acid in them helps considerably the effect of the drugs. If the patient objects to apples, you may supplement the effect by one of the saline aperient waters. But I caution you that if you prescribe these by themselves you will have disappointments. They create noise and rumbling and borborygmi, but produce little or no relief. Strychnine has been extolled as an adjuvant to these purgatives, but it is in my experience only useful in young people. There comes a time of life, say after the fiftieth year, when strychnine is of little or no use for the purpose of emptying the intestines.

OTHER LINES OF TREATMENT.

You must enjoin also as much exercise as the patient can obtain, or, failing that, abdominal massage. You are perhaps not aware of the fact that it is possible to knead the gall bladder through the abdominal wall by means of massage. I have

once or twice actually set up biliary colic as the result of thorough examination of the abdomen for suspected gall-stones.

Another way of overcoming the difficulty is by the use of enemata. Do not be frightened of enemata; I see no danger in them at all, and the practice is a common one on the Continent. One of the best ways is to give three or four ounces of olive oil, and a common soap enema an hour afterwards. On the next day the quantity of oil may be reduced to one ounce; and the patient ought also to be instructed to wear a pilch or napkin to prevent the oil exuding through the sphincter.

There is also something that must be said about surgical treatment. Search the anus for fissure, one of the most fertile causes of constipation in elderly women. This can in many cases be cured by getting the patient to wash the anus after each evacuation and to wear a small piece of boric wool over the part. If piles are present they should be removed or otherwise treated.

But when I read that the patient's large intestine should be taken away *en bloc*, or that, through a hole in the abdominal wall, medicaments should be injected, all I can say is that you will not get your patients to consent to such measures. We must not let surgeons go to such an extreme as to advocate intestinal anastomosis or the removal of six feet of the intestine for a condition which should be, and is, amenable to medical treatment. Speaking seriously, I should never advise any patient to undergo these severe operations; and I repeat that we ought to be able to cure this disease of chronic constipation by the means which I have laid down in this lecture.

THE UTERINE CANCER COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

AN APPEAL TO MEDICAL PRACTITIONERS FOR THE EARLIER RECOGNITION OF UTERINE CANCER.

By the courtesy of the Editor of the *British Medical Journal*, we are enabled to publish herewith an abstract of the appeal to which reference is made in our leading article in the present issue. The committee calls the attention of all medical practitioners to the necessity of emphasising the curability by operation of uterine cancer in its early stages. The adoption of a more extensive operation by the abdominal route has made it possible to deal successfully with cases hitherto regarded as inoperable, and to remove more of the pelvic cellular tissue as well as a portion of the vaginal walls; it is in these situations that recurrence is prone to develop. Many patients now present themselves for examination and treatment when the disease is considerably advanced.

Special attention is directed to the facts that cancer of the uterus is at first a local disease; it is often curable; operation is the only satisfactory method of treatment; the earlier the disease is recognised the more hopeful are the prospects of treatment; the risk of operation in early cases is slight, and the chance of permanent cure is good;

the recognition of early cancer is not usually difficult. A medical practitioner who fails to make a physical examination of a patient exhibiting any of the symptoms of uterine cancer incurs grave responsibility, since treatment of symptoms without physical examination is unjustifiable. In doubtful cases a diagnosis must and can be made in a few days. To examine, to diagnose, and then to treat, should be the rule in all cases.

The committee then give a *résumé* of the symptoms, methods of examination, varieties and microscopical appearances of cancer of the uterus. They emphasise the fact that as the majority of cases occur between the fortieth and fiftieth year, the symptoms are too often regarded by the patient as due to "change of life." The medical attendant should not accept this assumption until he is satisfied that cancer does not exist. Bleeding, however slight, occurring after the menopause, should give rise to suspicion that cancer is present.

If a patient with any of the above symptoms comes for advice, a careful visual and bi-manual examination must be made before any treatment is

recommended. Should a patient refuse to be examined—and this is exceptional when the situation is explained—the medical attendant should decline any further responsibility, and no treatment should be advised. The examination should be made, even if bleeding is present, as valuable time may be lost by postponement until the hæmorrhage has ceased. It is most important to observe rigid aseptic precautions in all manipulations. In the examination, the condition of the vaginal portion of the cervix and of the cervical canal should be carefully noted. The detection of high-lying cervical cancers, and cancers of the body of the uterus, is only possible after curettage or digital exploration.

The signs common to the early stages of cancer of the cervix uteri are:—

(1) The definite occurrence of new growth on the surface of the vaginal portion of the cervix, in the lining of the cervical canal, or in the substance of the cervix.

(2) Friability.

(3) Bleeding on manipulation.

(1) The definite occurrence of new growth on the portio vaginalis or in the cervical canal cannot fail to arouse suspicion. When, however, thickening of one lip of the cervix exists, the nature of the growth is difficult to determine if the mucous covering be still intact.

(2) Friability is a sign of the greatest importance, and may be tested by the finger-nail, curette, sound, or an ordinary long probe.

(3) The occurrence of free bleeding after the slightest manipulation is, when combined with friability, a valuable diagnostic aid.

The committee classifies the forms of uterine cancer into:—

(A) VAGINAL PORTION OF THE CERVIX.

(1) Infiltrating type.

(2) Papillomatous or polypoid type.

(3) Superficial flattened type.

(B) CERVICAL CANAL.

(1) Superficial type.

(2) Infiltrating type.

They draw especial attention to the fact that probably the majority of cancer cases which are overlooked are examples of disease affecting the lining of the cervical canal or the tissues of the wall of the cervix. Cancer beginning in the cervical canal is not difficult to detect where the os uteri is dilated, as in many multiparæ. The finger passed into the cervical canal feels irregular elevations or nodules from which portions may be removed. Free hæmorrhage follows this manipulation. Difficulty arises where the os uteri is not dilated and the disease is hidden. A sound carefully passed into the cervical canal may give the impression of impinging on an irregular nodular surface, or friable tissue may be removed by the curette. Free hæmorrhage following such manipulations is a suspicious sign. Thickening and hardening of the cervix may be detected by a rectal examination, which is most

helpful in detecting cancerous nodules in the cervical walls, and should always be made in such cases.

With regard to microscopical investigation, they formulate the excellent rule that in doubtful cases, if there be a suspicious hard nodule, or erosion, or ulcer on the external os uteri, a piece including a boundary of healthy tissue should be excised in the manner fully described in their appeal. "If the expert's report is favourable the patient will be reassured, if unfavourable immediate operation is imperative." As a summary they give the following axioms:—

(1) Attend to all symptoms suspicious of cancer, and instruct the patient on their importance;

(2) Examine immediately all cases of bleeding or abnormal discharge;

(3) Make a definite diagnosis, and do not wait for the disease to develop;

(4) Urge immediate operation if the diagnosis is established.

The practitioner who diagnoses cancer in an early stage, when operation offers a probability of cure, renders a service to his patient as great as that rendered by the operator.

Following the appeal to medical men appears—

A SHORT APPEAL TO MIDWIVES AND NURSES,

which runs as follows:—

Cancer of the womb is a very common and fatal disease in women, but *it can be cured by operation when it is recognised early.* A woman sometimes tells a nurse or midwife her ailments before she speaks to a doctor, and the nurse or midwife has then an opportunity of aiding our crusade against this terrible disease. *Cancer may occur at any age, and in a woman who looks quite well and who may have no pain, no wasting, no foul discharge, and no profuse bleeding.*

To wait for pain, wasting, foul discharge, or profuse bleeding is to throw away the chance of successful treatment.

The early signs of cancer of the womb are:—

(1) *Bleeding*, which occurs after the change of life;

(2) *Bleeding* after sexual intercourse, or after a vaginal douche;

(3) *Bleeding*, slight or abundant, even in young women, if occurring between the usual monthly periods, and especially when accompanied by a bad-smelling or watery blood-tinged discharge;

(4) *Thin watery discharge* occurring at any age.

The nurse or midwife who is told by a patient that she has any of these symptoms should insist upon her seeing a medical practitioner in order that an examination may be made without delay. By doing so she will often help to save a valuable life, and will bring credit to herself and to her calling.

MEDICINE.

PROTEID DIETARIES IN NEPHRITIS.

THERE are probably as great differences of opinion upon the question of what proteids, and what quantities of them, are permissible in cases of nephritis as upon any other in medicine. The following table, taken from a paper by Professor Gouget in the *Gazette des Hôpitaux*, shows the richness in albuminoids, fats, and carbohydrates of several foodstuffs, and it serves as a guide to the question under discussion:—

	Proteid in parts per 1,000	Fat in parts per 1,000	Carbohydrat ^e in parts per 1,000
Hen's egg	132	119	4
Beef	210	54	5
Ham	160	346	5
Sweetbread	220	4	0
Calves' kidneys	221	28	0
Brains	105	153	11
Salmon	216	127	0
Eels	128	283	0
Potatoes	16	1	200
Manioc	12	4	283
Chestnuts	57	16	384
Oatmeal	110	49	674
Barleymeal	105	17	696
Wheatflour	102	10	737
Bread	70	7	538
Peas	220	16	538
Lentils	238	18	528
Gruyère cheese	300	284	21
Brie (cream cheese)	179	253	35
Camembert (cream cheese)	179	253	35
Spinach	35	6	44
Carrots	12	3	92
Chocolate	62	210	676

Apart from the quantity of proteid food, does the kind of proteid matter? Are the albuminoids of milk or of vegetables better borne than those of eggs or of fish, or of meat? Claude Bernard and Stokvis having succeeded in producing albuminuria by the exhibition of a certain number of raw eggs, there has been a tendency to regard egg-albumin, which is relatively rich in sulphur, as particularly harmful, and some observers, such as Semmola, proscribe eggs in nephritis cases altogether. As a matter of fact, however, even though it might be unwise to give raw eggs in these cases, cooked eggs in moderate amount, and particularly their yolks, are by no means contra-indicated, and some authorities prefer them to meat. The latter is regarded by Germain See and others as the worst possible food in all cases of nephritis, yet some allow white meats, and not the red, which were formerly thought to be the richer in extractives. We know now, however, thanks particularly to the researches of Von Noorden and his pupils, that there is really no reason for preferring the former to the latter. At the same time, experience has shown that certain meats, such as fresh pork and ham that has not been salted, are particularly well borne by renal cases; whereas veal, especially very young veal, which gives rise to an eminently fermentible gelatine in the bowel, is far less good. According to Robin, beef should

be better than mutton, or even chicken. As regards fish, regarded with favour by Klemperer, excluded by Teissier and Renaut, it is probably neither better nor worse than meat when fresh. Lastly, vegetable proteids would seem to offer no decided superiority over animal nitrogenous compounds unless perhaps in so far as a greater percentage of them remains undigested—3 per cent. to 15 per cent.—which allows of a larger bulk being permitted without overstepping the nitrogen limits that may have been laid down in any particular case.

In acute uræmia the dietary must necessarily be very restricted, consisting for the most part of water only, with or without the addition of lactose. This, however, can scarcely be persisted with for more than eight-and-forty hours. If at the end of that time milk has to be substituted for water, and if this is not well borne, it may be necessary to replace it partly by some of the farinaceous substances mentioned below.

The milk or milk and farinaceous régime is indicated in quite acute nephritis; in the acute exacerbations of chronic nephritis; in cases in which uræmia threatens or is actually present; and in Bright's disease with severe cardiac failure. It is also wise to adopt it, initially and tentatively at any rate, in cases of subacute nephritis with much œdema, and in general in all cases of nephritis whose previous evolution is unknown; it tends above all other measures to increase the quantity of urine passed, and it is therefore to be employed in all renal conditions in which the urine, hitherto normal or increased in amount, is diminishing.

A milk dietary should not be persisted with too slavishly however. It should be adopted provisionally under the above circumstances, but if the patient ceases to make progress, and especially if no increase in the volume of urine passed is brought about, the quantity of milk given may be decreased and a corresponding amount of rice, arrowroot, sago, tapioca, chestnuts, or carrots allowed—cooked in some palatable and pleasant form. Potatoes, which contain much water and relatively far more carbohydrates than albuminoids, and which have so abundant a residue that the tendency to constipation is materially lessened, have been particularly advocated by some; cooked greens, ripe grapes, stewed fruits, and fruit jellies being also allowed. A little later, if these are tolerated well, various foods made from wheat flour may be ordered, such as bread, toast, or biscuits. Then will come fresh butter, the yolks of eggs, and puddings; next, but only at the mid-day meal, the products of peas, beans, or lentils, the effects of which have to be very carefully watched, because foods prepared from them are apt to be indigested owing to their richness in proteids and salts; eventually, one reaches cooked eggs, fresh fish, fresh pork or ham, and at last other meats that have been well boiled, stewed, or roasted without too much gravy or sauce. Such are the various steps that are

usually taken in succession, more or less quickly according to the case. Sometimes it is impossible to pass on further than the lacto-vegetarian phase.

Another aspect of the diet which may be of extreme importance is its richness in sodium chloride and its relative proportions of salt and of nitrogen. Roughly speaking, it is most important to curtail the sodium chloride chiefly in cases of parenchymatous nephritis with cedema, and to limit the nitrogen particularly in patients with granular kidneys. At the same time it should be remembered that this holds

good only in the most general way, and that the chlorides have to be watched in granular kidney cases and the nitrogen in acute nephritis. There can be little doubt that a milk diet in scarlatina patients, begun early and continued with for several weeks, is one of the surest means of preventing the nephritis of convalescence. It has been shown, however, that a much more generous dietary in which the chloride of sodium is alone restricted achieves the same end, with this advantage, that the better-fed patients convalesce more rapidly.

CONDITIONS SIMULATING ENLARGEMENT OF THE LIVER.—I.

ENLARGEMENT of the liver may be simulated if the organ is displaced downward or if it is deformed. It may be displaced downwards by the following conditions: emphysema; pleuritic effusion (right side); empyema (right side); pneumothorax (right side); pericardial effusion; subdiaphragmatic abscess; hepatoptosis. It may be deformed: congenitally or by tight lacing.

In emphysema the physical signs and the altered shape of the chest would be apparent. The difficulty arises when emphysema, with or without bronchitis, causes symptoms of failure of the right side of the heart: is the liver that may be palpable in such a case merely displaced downwards, or is it also enlarged from nutmeg change?

Emphysema is prone to occur in alcoholic subjects, and difficulty arises in distinguishing a cirrhotic from a merely displaced organ. The hardness in the cirrhotic case, the tenderness when there is recent nutmeg change, help considerably in the diagnosis.

In pleuritic effusion or in empyema of the right side the liver may be pushed down and the edge felt below the costal margin. Dulness at the right base might, of course, be due to a large tumour arising from the upper part of the right lobe, or to a hepatic abscess, or to a subdiaphragmatic abscess. One of the ways of distinguishing between these and an effusion into the right pleural cavity is to be very careful in the percussion of the dulness behind, in the axilla, and in front, with a view to marking the outline of its upper limit with all the accuracy possible, that is.

In cases of pleuritic effusion the dulness as a rule extends higher behind than it does in the axilla, and higher in the axilla than it does in front; whereas when due to subdiaphragmatic or hepatic causes it is quite often higher in the axilla than it is either behind or in front; in other words, the outline of the dulness is dome-shaped, with the convexity of the dome highest in the axilla. In cases of pneumothorax the physical signs are nearly always sufficiently distinctive.

In all these conditions an important point is that the organ will be found to move very little, if at all, during respiration, or even as the result of a maximum inspiratory effort.

Subdiaphragmatic abscess is frequently obscure and difficult to diagnose. It is apt to be mistaken for empyema or for hepatic abscess. When a subdiaphragmatic abscess has arisen as the result of

perforating gastric or duodenal ulcer, the physical signs may be particularly baffling, owing to the fact that the abscess cavity is likely to contain gas as well as pus; pyopneumothorax may be simulated.

Dislocation and undue mobility of the liver may result from the great weight of a much enlarged organ, the actual increase in size being thereby exaggerated. On the other hand, as part of a general enteroptosis, a perfectly normal-sized liver may come so low in the abdomen that it may mislead the observer into regarding it as increased in size. Hepatoptosis is most marked when the patient is in the erect position. A large part of the surface of the viscus comes into contact with the abdominal wall, and in some cases the dislocation is so great that on palpation the hand can be placed between its upper border and the costal margin. If hepatoptosis is suspected the abdomen should be examined both when the patient is supine and also when standing.

A curious form of displacement which may simulate enlargement is tilting of the right lobe downwards and inwards so that the normal transverse axis of the organ becomes vertical, and the edge, instead of being obliquely transverse, may be lying almost vertically, with the tip of the gall bladder pointing to the left instead of downwards.

The "tight-lacing" liver is usually much elongated in its vertical axis, the lateral pressure of tight lacing, as it were, squeezing out a portion from under the ribs. The edge of this projecting portion may reach to the level of the umbilicus or even to the iliac crest in the right nipple line without the volume and weight of the organ being greater than normal. Between the constricted portion and the upper and main part of the viscus there may be a deep transverse groove which comes down during inspiration so as to be palpable. The lower portion may be freely movable, and in consequence be mistaken for a dilated gall-bladder or for a movable kidney.

The sharp, well-defined lower edge should at once serve to distinguish it from a renal tumour; besides, on bimanual palpation it cannot be felt to fill out the loin in the way that a renal tumour nearly always does. From a true enlargement of the liver it must be distinguished by its limited size, its mobility, the detection of a transverse groove between it and the main part of the organ, its occurrence in women, and the general condition of the figure brought about by tight-lacing.

(To be continued.)

SURGERY.

INTERNAL DERANGEMENTS OF THE KNEE-JOINT.

THE knee-joint is more exposed to injury than any other joint in the body. The assumption of the erect attitude in man has caused modifications in its anatomical structure. In order to support the body, the articular ends of the bones which enter into its formation are large and broad; and in order to allow free flexion and extension, as in walking, or more particularly in running, the bulk of the periarticular structures has been reduced to a minimum; and the joint is surrounded not by muscles, but by tendons. It is, therefore, peculiarly liable to be injured by blows from without, and has also little power of resisting any strain thrown upon it by a lateral twist.

As a result of such strains it is common to find that some portion of the delicate internal mechanism of the joint is displaced or deranged. At one time all such injuries were classed under the heading of "loose cartilage"; but it is now recognised that there is a large variety of injuries occurring in the knee-joint which give rise to a similar series of symptoms, in some of which the cartilage itself is neither damaged nor loose, and it is therefore convenient to employ the more comprehensive title "internal derangements of the knee-joint," which covers all.

The semilunar cartilage may be damaged and become swollen, as the result of a strain, without its necessarily being detached, and this may lead to some chronic thickening of its anterior cornu, which may be pinched when the joint is extended, and so impair the freedom of movement. Or, again, the tip of the cartilage only may be detached and twisted on itself with a similar result. Much more rarely the whole cartilage is torn from its attachments and forms a genuine loose body within the joint. And the cartilage may be torn across in the longitudinal or transverse axis, the two halves remaining attached to the bone.

A genuine loose body in the joint may cause symptoms almost identical with those which are associated with a torn semi-lunar cartilage. The causes of a loose body are legion. They may result from the detachment of one of the normal structures—*e.g.* a semi-lunar cartilage or some part of it; but quite as often one of the accessory structures, such as the ligamenta alaria, is the starting point of the trouble. But the most frequent cause of a genuine loose body is the detachment of outgrowths which are not normally present, but owe their existence to a pathological condition of the joint. Such are the cartilaginous processes which are formed upon the synovium or upon the semilunar cartilages themselves in osteo-arthritis or the so-called "melon-seed" bodies which are occasionally the outcome of altered blood clot, but are more commonly tuberculous in origin.

But whether the condition results from normal or abnormal constituents of the joint, it is always, or nearly always, directly caused by a lateral twist or strain; and football and tennis are the most fertile cause of such accidents. After the accident the patient is conscious of great pain in the knee-joint, and has to keep to his bed. In a short time, generally a few hours, but at most a day or two, the knee begins to swell up on account of the accompanying synovitis

with effusion. This subsides in a varying time, and when he first begins to get about again the patient is conscious only of a sense of weakness in the affected joint. The weakness is due to a residual chronic synovitis, the inflammatory exudate being rarely, if ever, completely absorbed so as to leave the joint in as good a condition as it was before. In addition to this, if there has been much fluid in the joint, the capsule and the periarticular structures will have been definitely weakened by the increased tension to which they have been subjected, even if only for a comparatively short time. A knee-joint which has once suffered acute trauma is rarely quite sound again.

The patient soon becomes conscious of this weakness, because the knee exhibits a tendency to swell after any strain has been thrown upon it, as in walking or more particularly in standing still for any length of time.

If there is a loose body in the joint other and more serious results ensue. The loose structure occasionally gets nipped between the ends of the bones, causing an excruciating pain, so that the patient often falls to the ground with such suddenness that he is unable to protect himself by putting out his hand: moreover the knee is often found locked after such occurrences, that is to say the leg is found to be flexed at the knee-joint and cannot be actively extended, so that traction has to be applied. After each such occasion there is a recurrence of the synovitis, which lasts for a few days.

When the knee is examined in the quiet stage it is quite usual to find no gross evidence of any damage. Its outline is normal and movements may be easily and naturally performed; but occasionally there is a distinct click when the leg is extended, and more rarely a loose body can be felt to be extruded laterally from the joint. The patient can sometimes make it appear voluntarily.

The treatment of this condition is not very satisfactory. It may be laid down as a rule that all palliative measures should be tried before operation is resorted to. The best results are obtained by massaging the leg and making the patient do exercises. An efficient exerciser for home use may be made with a stirrup attached to a tin of shot by a rope, which is passed over a pulley at a convenient distance from the ground. The foot is placed in the stirrup and works up and down against the resistance of the weight. The rationale of this treatment is to increase the strength of the capsule and periarticular structures, so that the loose body is kept within due bounds. The removal of the loose body by operation gives brilliant results in selected cases, and is specially indicated in those in which a loose body, whether it be a cartilage or synovial fringe can be felt. It is also demanded of the recurrent attacks of nipping of the loose body with synovitis and locking of the joint are so frequent as to incapacitate the patient from pursuing his occupations. But if these operations are performed indiscriminately many disappointing results will be encountered.

GYNÆCOLOGY.

ELONGATION OF THE CERVIX UTERI.

ELONGATION of the supra-vaginal portion of the cervix uteri is a common condition, and plays an important part in cases of prolapse of the vaginal walls and incidentally in descent of the uterus itself. Elongation of the vaginal portion of the cervix is uncommon and is a congenital malformation in its strict sense, for those cases in which there is hypertrophy of the vaginal portion associated with bilateral lacerations and chronic endocervicitis are not strictly elongations. These latter conditions are really a hyperplasia of all the tissues of the injured cervix, and the elongation present is apparent, not real. True elongation of the portio vaginalis exists from birth, and may be discovered for the first time after marriage or in a virgin if some other symptom calls for examination. Of two such cases seen recently by the writer, one occurred in a married woman who had had one child, and the other occurred in a virgin who acquired just sufficient descent of the uterus to make the elongated cervix appear at the vaginal orifice. In both these cases the portio vaginalis was elongated to the extent of one and a half inches of projection from the vaginal roof. In all respects, except length, there was nothing abnormal; there was no evidence of an inflammatory lesion, and the tissues appeared quite healthy on section. In both cases the reason for seeking advice was the appearance of the os uteri at the vaginal entrance on account of a slight degree of descent of the uterus, acquired in the one case as a result of labour and subinvolution, in the other (the virgin) as a result of heavy work and overstrain. There can be no mistaking these conditions for any other form of elongation, for on pushing up the whole uterus into its proper place in the pelvis, the portio vaginalis projects from the vaginal fornices in a manner which at once makes the diagnosis clear.

When the elongation occurs in the supra-vaginal portion of the cervix the condition is always acquired; by far the commonest cause, if not the only one, is the drag of the vaginal walls upon their vaginal attachments in cases of cystocele, with sometimes rectocele in addition. The important question arises, why is it that in some cases cystocele and rectocele produce prolapse of the uterus without any cervical elongation, in others produce some prolapse with some cervical elongation, and yet in others produce elongation without appreciable prolapse of the uterus? The answer in any particular case is not always easy to formulate, but it must primarily depend on the degree of looseness of the uterine attachments. It is easy to see that if the uterus is only loosely held in the pelvis, any drag on the cervix by the vaginal walls will produce descent of the whole organ without any tendency to elongate the cervix. We see this more often in old women, in whom the vaginal walls are likely to become completely everted, carrying the uterus with them. On the other hand, in younger or middle-aged women, it is possible for the bladder to form a cystocele, and yet the uterus may be held just sufficiently firmly in its place to prevent easy descent. In such cases

the drag of a constant cystocele may slowly cause extension of the supra-vaginal cervix, whilst the fundus uteri only very gradually descends. These are the cases of moderate uterine descent with so much elongation of the supra-vaginal cervix as to make the internal measurement of the uterus reach four or five inches, all due to supra-vaginal elongation of the cervix. These are the common cases met with clinically; the third class of case in which cystocele causes supra-vaginal elongation without any uterine descent is very rare. One such case known to the writer occurred in a young woman who had had ventro-fixation done for uterine prolapse. This held the fundus closely to the abdominal wall, but did not prevent the cystocele present from constantly exerting traction on the cervix and slowly elongating it until the os uteri appeared at the vulva. Such a case was an object-lesson not only in the ætiology of supra-vaginal elongation, but also in the futility of ventro-fixation *alone* as a cure for prolapse of the uterus.

Pathologically, elongation is usually accompanied by some hypertrophy of the cervix, for although the diameter of the elongated portion is smaller than normal, it is not so small as it should be if the elongation were mere stretching. There must be some compensatory tissue growth, and as a rule this is a fibrous hyperplasia. It is difficult to say what the effect upon the bladder is in these cases, for very few frozen sections of such conditions are in existence. But when we think how loose the attachment of the bladder usually is to the uterus and how much the bladder projects downwards in a bad cystocele, it is probable that the bladder descends as a whole with the uterus, and that its actual attachment to the uterus is not stretched. We do not find an undue amount of bladder attached to an elongated cervix if we wish to strip off the bladder. The symptoms of an elongated cervix cannot be differentiated from those caused by prolapse of the uterus; it is only on examination that we can say whether there is more prolapse than cervical elongation or vice versa. It is unnecessary to use the uterine sound for this purpose, for the great length of the uterus and its comparatively small diameter and bulk can be easily appreciated on making a bi-manual examination after pushing the cervix back and replacing the vaginal vault as far as possible with the fingers. The sound should only be used to define accurately the length of the uterus just before operating on such a case when the vagina and external parts have been made aseptic. When the uterus has been pushed up into its normal place in the pelvis and the vaginal fornices do not descend, it is easy to distinguish between supra-vaginal and true elongation of the vaginal portion, for under these conditions the latter may still be seen to project definitely below the fornices.

The treatment of any form of cervical elongation must be amputation in the first instance, combined with measures to prevent a recurrence of the causes of that elongation.

LARYNGOLOGY AND RHINOLOGY.

EPISTAXIS.

HÆMORRHAGE from the nose may be due primarily to various systemic diseases, to certain alterations of environment, or to local affections. Constitutional diseases cause bleeding in two ways, either by raising the blood-pressure or by producing alterations in the quality or coagulability of the blood; but it is not possible in every case to determine by which method the effect has been produced.

GENERAL CONDITIONS.

Epistaxis is frequently associated with such diseases as chronic nephritis, arteriosclerosis, cirrhosis of the liver; with blood-diseases such as purpura, scurvy, the severe anæmias, leucocythæmia, and hæmophilia; and with acute fevers such as enteric fever, pneumonia, scarlet fever, and measles. It is distinctly uncommon in cases of venous engorgement due to cardiac and pulmonary disease, even when associated with a marked degree of cyanosis. It occurs also in certain conditions which cannot be described as diseases, for it is especially common in delicate growing children about the age of puberty without any obvious pathological cause, and it is a frequent accident among persons going rapidly into a rarefied atmosphere, as in balloon ascents and mountain climbs. Nose-bleeding is very common in persons of the so-called plethoric habit, and it is sometimes stated that it indicates a liability to apoplexy, but it is at least doubtful if this is actually the case.

The epistaxis of these diseases may be slight or very profuse, and may recur repeatedly from one or both or alternate nostrils until the patient shows serious signs of loss of blood; but it is seldom fatal, and rarely even dangerous, except in the severer forms of profound alterations of the blood. In hæmophilia the nose is the commonest of all sites for bleeding, and the slow, continuous dripping is highly characteristic. Of the acute fevers, enteric is peculiarly associated with epistaxis.

LOCAL AFFECTIONS.

In healthy people the commonest cause of epistaxis is a condition of dry rhinitis. The nasal mucous membrane has the task of moistening all the inspired air, and has to provide a large amount of aqueous vapour for the purpose. If the secreting power of the glands falls a little below normal, the mucous lining becomes too dry, and this occurs especially where the current of air first impinges—namely, at an area on the septum within an inch of the nostril. If this part of the septum projects slightly to one side, the effect is there increased, and, in point of fact, the bleeding spot is often found at the apex of such a projection. Several small vessels may often be seen on this region, and the hæmorrhage usually occurs from a minute erosion on one of these. When the mucosa becomes dry, a small crust of dried mucous and dust tends to adhere to the spot, and, on forcible removal by pick-

ing or violent blowing of the nose, leaves a tiny erosion which is deepened and extended by repetition of the process.

Two other local causes of bleeding are of some importance, for though uncommon they may cause profuse and repeated hæmorrhage, and should not be overlooked. The first is the so-called "bleeding polypus of the septum," which is a purplish rounded growth, varying in size from a pin's head to a bean, histologically an angioma, and springing from the region of the septum, already mentioned as the common site for epistaxis. The second is largely explained by its title "hereditary multiple telangiectases," and has attracted much attention of late; it is characterised by the presence of minute telangiectases scattered over the cheeks, mouth, and mucous membrane of the nose, fauces, and palate, which bleed on the slightest provocation. Hæmorrhage from the nose also accompanies severe ulceration and necrosis and malignant growths; it should be noted that it is not a symptom of the ordinary mucous polypus, and that spontaneous bleeding from an apparently simple polypus should arouse the suspicion of malignancy. Bleeding, of course, is common after injury, especially accompanied by fracture, and severe recurrent hæmorrhage is fairly frequent after surgical procedures, especially when vaso-constrictors, such as adrenalin, have been freely used. In cases of epistaxis, also, due to constitutional disease the bleeding is nearly always from the anterior part of the septum, but it may occur from any part or be a general oozing, especially in hæmophilia and the blood-diseases. Brown Kelly refers to cases of hæmorrhage occurring from the region above the anterior end of the middle turbinal body.

TREATMENT.

In the large majority of cases, epistaxis occurring from the front part of the septum, may be temporarily arrested by inserting a plug of gauze or wool for an inch within the nostril, and making pressure on it with the finger on the ala of the nose. After the hæmorrhage has been arrested the bleeding point should be sealed with the cautery at a dull red heat. The minute erosion is often indistinguishable, and it is often wise to re-start the bleeding by gentle stroking with a probe, and then to arrest it by a pledget of wool soaked in cocaine solution before using the cautery. It should be remembered that hæmorrhage is liable to recur from a neighbouring spot or from the opposite side. Bleeding from the deeper parts, as after operation or in severe constitutional diseases, demands plugging of the nose. Rose's tampon is troublesome and often unsatisfactory; and plugging the posterior nares, as with Bellocq's sound, should never be performed, for the blood collected in the nasal cavities penetrates into the accessory sinuses, and may readily infect them. The plugging must always be done by introducing a strip of ribbon gauze with

fine nasal forceps, and should produce an even and regular pressure. Powerful styptics must on no account be employed, and the use of adrenalin causes subsequent vaso-dilatation, and is inadvisable. Peroxide of hydrogen has none of these disadvantages, and the gauze may well be dipped in a five-volume solution of this drug before insertion. It must never be left for more than 36 hours, but must then be removed, and, if necessary, replaced. Otherwise the dangers of sepsis are considerable, and include severe inflammations of the middle ear. The gauze should be removed very

gently after thorough moistening, preferably with peroxide of hydrogen. In many cases of severe bleeding restlessness and a rapid pulse are prominent features, and an injection of morphia is of the greatest value. In hæmophilia, and wherever the coagulability of the blood is diminished, calcium lactate in doses of 15 to 30 grains every four hours is recommended, though its action is not yet definitely proved. Of minor measures, the patient should be kept quiet in bed with the head raised, iced water may be applied to the face, and hot bottles to the feet and trunk.

NEUROLOGY.

THE CORTICAL LESION FOR MOTOR APHASIA.

UNTIL a few years ago it seemed firmly established that the cortical motor area for speech in the human brain is in Broca's area in the operculum triangularis of the third left frontal convolution. Then Marie declared that this is all wrong, and that motor aphasia is due not to a lesion in Broca's area, but to affections of other parts of the brain. It will be a relief to those who do not like old-established ideas to be suddenly uprooted to hear of a case in which motor aphasia was caused by softening exactly localised to the foot of the third left frontal convolution.

It is clear that whether one destroys the root of a tree or cuts through the trunk close to the root the effect upon the branches will be the same; similarly, motor aphasia may be caused just as well by a lesion which destroys the fibres coming from Broca's area as by one which destroys Broca's area itself. The fact that a patient suffering from motor aphasia may die and exhibit a perfectly normal Broca's area is no proof that this is not the motor centre for speech in the cerebral cortex, for there may be a lesion in the white matter immediately beneath it, causing the same result as if the grey matter were itself destroyed.

The patient in question, as recorded by Chauffard and Rathery, was a woman, 61 years old when admitted to hospital. Two days previously she had hardly returned home from doing a little shopping when she suddenly felt ill and sat down in a chair. From that moment, without any apoplectic attack and without any loss of consciousness, she had been entirely unable to speak, though up to then her speech had been perfectly normal.

When seen in hospital it was obvious that there was facial paralysis below the eyelids on the right side, and a very slight diminution in power in the right arm and hand. Sensibility and all the ordinary reflexes were natural. There was neither albumin nor sugar in the urine. When she was spoken to it became clear that she was quite unable to reply. She made visible efforts to do so, but only succeeded in producing sounds that were unintelligible. She understood everything that was said to her perfectly, and at once performed any of the simple movements that she was asked to.

The diagnosis of motor aphasia seemed clear and beyond doubt. Further investigations were, how-

ever, impossible, for the malady progressed so rapidly that the patient quickly sank and died eight days later. There was a post-mortem examination, which entirely confirmed the older views as to speech localisation in Broca's area. On the surface of the left hemisphere, at the level of the opercula, particularly in that portion of the latter which is situated in front of the fissure of Rolando and at the base of the third frontal convolution, there was a red area well demarcated from the normal colour of the rest of the brain; the meninges at this spot were slightly raised by excess of blood-stained serous exudate beneath the pia mater; the brain tissue beneath was distinctly bulged and on section it was found to be softened and reddened—the softening being sharply restricted to the region mentioned.

Sections of the hemispheres at various levels showed that there was no lesion in the internal capsules, corpora striata, optic thalami, or white matter of the third frontal convolutions. At the level of the anterior convolution of the island of Reil there was a small focus of softening the size of a pea, and beneath the opercula in direct relation with the anterior convolution of the island of Reil there was another small focus of necrosis of similar size. Finally, close to the beginning of the second left frontal convolution there was a patch of red softening, of the area of a threepenny piece, similar in appearance to that in the third left frontal convolution, but less in extent. The main mass of softening, indeed, was confined to Broca's area.

When the left Sylvian fissure was opened up so as to expose the Sylvian artery, an ante-mortem thrombus was discovered at a bifurcation of the latter. Careful dissection showed that the branch that was blocked was precisely that which supplies the third left frontal convolution. Transverse sections showed that the clot was undoubtedly adherent to the vessel wall. Further examination showed that the original cause of the cerebral lesion was embolism from malignant endocarditis, the mitral valve being covered with exuberant vegetations. There were infarcts in the spleen and in the lungs.

The interest of the case lies mainly in the occurrence of motor aphasia from a lesion almost confined to Broca's area, notwithstanding recent expressions of opinion that Broca's area is not really the motor centre for intelligent speech.

THE ROYAL ARMY MEDICAL CORPS SECTION.

RECRUITING DUTIES OF THE TERRITORIAL REGIMENTAL SURGEON.

As the examination of all the recruits of his battalion is one of the duties of the Territorial Regimental Surgeon, and as the War Office Memorandum of March 22, 1909, on the training of the Territorial Medical Service, an outline of which has already been given in *THE HOSPITAL*, specially lays it down that attention is to be paid to the practical instruction of medical officers in this work, it may not be out of place to outline briefly the procedure insisted on by the military authorities. Before doing so, it may be mentioned that paragraph 611 of the Territorial Regulations grants County Associations a fee of 1s. for the medical examination of each recruit who joins the Territorial Force within its county area, the grant being calculated on the number of recruits enlisted during the year ending October 31. This grant is handed over to the regimental surgeon; but it should be noted that the fee is only given for recruits who have been pronounced fit for enlistment. Nothing is allowed for those rejected, although the time of the medical officer is equally expended on them.

This scarcely seems a fair arrangement. In our opinion every recruit examined should be paid for. It will be found that the chief recruiting periods vary in different parts of the country, but with the majority of the Territorial units the early months of the year are the best, so that it is at this time regimental medical officers should calculate on their services being required, and it should be borne in mind that the work may be much facilitated by arranging with the adjutant of the battalion that the recruits will assemble in batches on certain evenings for examination.

The guide to be followed by the regimental surgeon in examining recruits is the pamphlet issued by the military authorities at the end of last year, and entitled "Instructions for the Physical Examination of Candidates for the Territorial Force." Its opening paragraph states definitely the conditions that call for rejection. With these the medical officer must make himself thoroughly acquainted. The list is a long one, but, summarised, it amounts to this, that the object of the medical examination of the Territorial recruit is to testify to the man's *general fitness for service*; in other words, to show that his heart and lungs are sound, that he has no organic disease, that he is free from any serious bodily defect, such as hernia or varicose veins, that his sight and hearing are good, and that he has sufficient number of teeth for the proper mastication of his food. The subsequent paragraphs of the pamphlet enumerate for the guidance of the examiner the order in which the examination is to be carried out, and in its main outline it follows, as far as possible, that adopted in the enlistment of recruits for the Regular Army; but the Territorial regimental surgeon will be wise if he conducts his examination with every consideration for the feelings of the civilian soldier, seeing that as much privacy as

possible is given, and that the question of removing all clothing at the same time is not pressed. Removal of portions of clothing at one time, as is done in examination for life assurance, meets all the requirements of the examination.

Of the two documents given to the Territorial recruit on presenting himself for enlistment, one is an attestation form, and on the second page of it will be found a form for the Medical Inspection Report. After the different items of it have been filled in by the medical examiner, he will find underneath it a form of certificate which he has to sign, saying whether or not he considers the recruit fit for admission to the Territorial Force.

The order of examination for completing the Inspection Report commences with taking the height. This should be done with the boots off, the heels being together and touching the standard so as to be sure both heels are on the ground all the time. Should the recruit be measured with his boots on, one inch should be taken off the height. There is no entry for weight, but it should be taken, if possible, so as to serve as a criterion for comparison with the height. Then follows the chest measurement, the maximum on full inspiration being first noted, and then the minimum on full expiration, so as to obtain the range of expansion. For taking the chest measurements the hands should be raised above the head to allow of the tape being adjusted. When in position its posterior upper edge should touch the inferior angles of the shoulder blades, and its anterior lower edge the upper part of the nipples. When the tape is properly adjusted, bring the arms down so as to hang loosely by the side, and let the recruit breathe quietly for one or two respirations before fully expanding and emptying the chest. It is a good plan for the medical examiner to show the recruit what is needed, and to explain to him that by whistling he can more effectually empty his chest.

Passing next to eyesight, the recruit's vision is tested by Snellen's types, that by dots having been done away with. Each eye must be tested separately, and if D-24 can be read at 20 ft. with each eye without glasses, the recruit is considered "fit." Should he fail with either eye with D-24, but can do D-6 with one eye without glasses at 20 ft., and not less than D-36 with the other without glasses, he will be regarded as "fit." When a recruit does not reach either of these standards he must be rejected. Nothing definite is laid down in the instructions about glasses, but if recruits who use glasses come up to D-6 at 20 ft. with each eye they can be accepted.

If the recruit satisfies the medical examiner in all the above respects, his general examination is proceeded with. This is conducted on definite lines, attention being first directed to the physical development, then to the trunk, next to the upper extremities, and lastly to the lower limbs. The heart and lungs are subjected to a careful stetho-

scopic examination, and then steps are taken to detect any deformities and to be sure that the recruit has full use of all his joints. The medical examiner satisfies himself by the usual tests of the absence of hernia, varicocele, varicose veins, extreme flatness of feet, and that there is no otorrhœa. It is also important to observe carefully the intelligence, character of voice, and power of hearing of the man, and this can be done to a large extent by his replies to the questions put to him.

The condition of the teeth must not be neglected. The rule in the Regular Army is that there must be two molars meeting either on one side or the other; in other words, there must be four double

teeth in working order, together with a fairly good set of front teeth. In the Territorial Force it is allowable to pass a recruit if he has two molars in apposition on only one side of four bicuspsids, provided it is thought digestion would not be interfered with and he seems well nourished.

The above outline of medical examination should be followed, and it will be found to embrace all that is essentially needed so as to ensure only the admission of men of general fitness, who will be able to stand the strain of field training and meet the extra physical demands of camp life, especially if there is conjoined with this health a sound knowledge of personal hygiene.

THERAPEUTICS AND PHARMACY.

CALCIUM FLUORIDE.

THE therapeutic uses of the fluorides have received comparatively little attention, notwithstanding the fact that it is now generally recognised that a certain amount of fluorine in the form of calcium fluoride is a necessity for the proper strengthening and consistence of the bones and for the normal hardness and good condition of the teeth. According to the *Pharmaceutical Journal*, however, at least two observers have successfully employed calcium fluoride therapeutically—namely, A. Robin and A. Brissemoret. The powder originally prescribed by Robin is said to have been as follows:—

Magnesium carbonate	...	...	10 cgm.
Calcium carbonate	...	...	25 cgm.
Calcium triphosphate	...	...	25 cgm.
Calcium fluoride	...	...	1 cgm.
White sugar	...	...	1 gram.

One such powder to be taken daily.

Brissemoret found that the administration of calcium fluoride to the extent of 5 milligrams per diem, 15 days a month, had a marked influence in arresting dental caries. He advocates its use for growing children if the bones do not seem very strong; for children or adults suffering from dental caries; and for cases of fracture to promote the formation of callus; also for tuberculosis to aid the remineralisa-

tion of the system, and during pregnancy and lactation under certain conditions. In these cases he prescribes the following powder:—

Calcium fluoride	...	...	75 milligrams.
Potassium phosphate	...	...	3 grams.
Sodium phosphate	...	...	5 grams.
Magnesium phosphate	...	...	10 grams.
Calcium phosphate	...	...	10 grams.
Sodium citrate	...	...	15 grams.
Milk sugar	...	...	to 100 grams.

Half a teaspoonful of the mixed powder twice daily, at meals.

For cases of fractures, to hasten the formation of callus, and to strengthen it when formed, the following powder is given:—

Calcium fluoride	...	...	5 cgm.
Magnesium fluoride	...	...	2 cgm.
Calcium bromide	...	...	2.5 grams.
Calcium phosphate	...	...	5 grams.
Calcium carbonate	...	...	5 grams.

Mix and divide into 20 powders. One twice daily.

We do not pretend to vouch for the efficacy of the above prescriptions, still less of the fluorides contained in them; but we think that the suggestions seem sound and worthy of consideration. We should be glad to hear the experiences of any readers who have tried this method of treatment.

DERMATOLOGY.

THE TREATMENT OF CEMENT DERMATITIS.

"CEMENT ITCH," is a well-known industrial complaint, to which labourers, plasterers, and others who may have occasion to handle cement are liable. It is an acute vesiculating dermatitis due to irritation of the skin by particles of cement powder. Some skins are more sensitive than others, so that several labourers may be working with the same cement and yet only one of them may suffer. On the other hand, there are different sorts of cement, some, doubtless, more irritating than others. The lesion is very like an acute eczema, but it is readily distinguished from eczema proper; first by the distribution—the hands and the arms up to the elbow are most liable to the lesion, the chest less so, and the covered parts least of all; secondly, by the history of the patient's occu-

pation; and thirdly, by the healing of the dermatitis when cement work is stopped, and its liability to recur whenever work is recommenced.

The treatment of the acute dermatitis is essentially by cessation of the work, together with the use of bland application such as a liniment of calamine applied upon lint, kept on with a bandage, and changed two or three times a day. Prophylaxis is, however, the thing to be aimed at. To prevent the trouble some workmen use grease or oil, applied to the skin before they begin work. Others try to use gloves, though these are seldom satisfactory, because they wear through so quickly. The best and simplest preventive is to advise the patient to wash the exposed parts carefully as soon as work is done, particular care being taken to clean the nails so that no cement is left adhering to them.

MOToring NOTES.

REMARKS ON CYLINDERS AND INSURANCE.

ADVANTAGES OF THE SINGLE-CYLINDER.

READERS of these notes will, no doubt, have observed my partiality for the single-cylinder car as the most suitable for the medical man, since to him simplicity, reliability, and efficiency must be of far greater importance than the refinements of running associated with the "four-cylinder drive." It was, therefore, with very great pleasure I read in last week's issue of *The Motor* the opinion of Mr. Henry Sturmey on the efficiency of the petrol engine in regard to the number of cylinders employed.

Mr. Sturmey, who is, perhaps, the greatest living authority on motors at the present day, says: "When we come to the question of efficiency, all experience goes to show that the fewer the number of cylinders the greater will be the efficiency, and therefore it is not at all surprising that in motor cycle work the single-cylinder engine holds its own. It is the same with cars, and the single-cylinder engine is undoubtedly the most efficient type on the market; that is to say, of course, provided the design be the same in each case. And, after all, this matter whittles itself down to a mechanical one. Every moving part absorbs power, and the fewer the number of moving parts there are the less will be the consumption of power in friction through them, so that, given the point of all other things being equal, it may be taken not only as a matter of opinion, but as a matter of incontrovertible fact, that the two-cylinder engine will be more efficient than the four or the six, and, carrying the argument still further, that the single-cylinder engine will be more efficient than either of them."

FURTHER EXPERT CONFIRMATION.

Another well-known correspondent of the same journal, writing on this subject, says: "If one has a strictly limited amount to spend on a car and its upkeep, and requires the nearest it is possible to obtain to the ideally simple car—simplicity in construction will also be synonymous with the least amount of attention to maintain it in good running order—then the balance will weigh heavily on the single-cylinder side. But there is bound to be some sacrifice which has to be made, and this will mainly be in the running of the car. Suppose one resides in a hilly country, it must not be expected that the single-cylinder will prove so comfortable or be so easy a car to handle as the four. This must not be taken as implying that the single would be a bad climber—in fact, a good single in skilled hands would often do better than an equally good four handled indifferently—but it would be entirely a matter of a greater amount of attention and judgment in the manipulation of the single-cylinder to maintain a good average on the hilly roads, because it would lack the range of flexibility and evenness of torque which are the leading characteristics of the four-cylinder, and which mean so much in hill-climbing. In the matter of the amount of attention that has to be given to a four-

cylinder to keep it up to the point of maximum efficiency, this will be obvious to anyone who has given the subject the least consideration. The parts of the single-cylinder that have to be looked after, such as valves, sparking plugs, bearings, are multiplied fourfold, and the consumption of petrol and lubricating oil is always greater."

CYLINDERS AND SILENCE.

From the foregoing it will be seen that the single-cylinder engine, in the opinion of recognised experts, has great points in its favour, and much to recommend it to a large class of motorists in general and to the medical man in particular. The only points on which the multi-cylinder has the advantage are perhaps flexibility and silence. With regard to the latter this is not always very marked; in fact, I have lately had an opportunity of contrasting in this respect my own single-cylinder with two twin-cylinder and one four-cylinder engines. On each occasion I met the owners on the road, and whilst we stopped to speak the engines of the cars, which were well throttled down, were running light. I could not help remarking how silent my car was in comparison with both two-cylinders, and in this opinion their owners concurred. In comparison with the four cylinder there was very little difference; but it must be admitted that this particular car was not of what is generally termed a very high class. I have already dealt more than once in this column with the comparison of the one-cylinder with the multi-cylinder engine, and only draw attention to it again because experience shows me that the many advantages of the single-cylinder engine are not as fully appreciated by the medical profession as they should be.

CAR INSURANCE.

Since it is most important for every owner, no matter how small his car may be, to insure it for a proper amount, I have been making inquiries with the idea of discovering some company that would be willing to insure the doctor's small car of 6 to 8 h.-p. upon moderate and reasonable terms. I have pointed out that the medical man, as a rule, is not the kind of motorist who drives at a furious pace, that his driving is usually all done in a certain area, where every inch of the road is familiar to him, and that, taken altogether, he is the kind of motorist least liable, through personal negligence, to accident. I have not yet found any insurance company that will make special concessions to the profession or in any way reduce the premium. The lowest rate that has been proposed is that of the International Insurance Company, of Booth Street, Manchester, and 199 Piccadilly, W., which issues a policy for a 6 to 8 h.-p. car covering £50 third party risks, £75 damage to car, and £100 fire, with no limit for the year at a premium of £5 10s. "VIATOR."

DENTAL DEPARTMENT.

DIAGNOSIS IN ACUTE TOOTHACHE.

THE diagnosis of odontalgia presents few difficulties. As a rule the patient comes complaining of acute pain in a tooth, and if asked to put a fingertip on the tooth which he thinks is the cause of his trouble, he is often successful in indicating the exact tooth which is at fault; and almost invariably this tooth is the subject of dental caries. But sometimes the diagnosis is not quite so simple, for the patient may be unable to localise any particular tooth, though, unless more than one tooth is at fault, he can always say definitely which side of the face is affected. Or the patient may localise a tooth which on thorough examination appears quite free from caries; or may refer the pain to the ear, or the eyes, or the angle of the jaw; or, again, may say the pain is all over the head, or that it jumps about, now to one place, now to another.

It is right to examine first and thoroughly the tooth which the patient suspects to be the origin of his toothache, because his belief is so often correct. If no fault can be found in the tooth pointed out, we examine the teeth in the region from which we know the pain is likely to be referred. We know that, with a carious lower third molar, the pain is often referred to teeth in the neighbourhood of the mental foramen, most often the first premolar; that with any carious upper posterior teeth, the pain may be referred to its antagonist in the lower jaw, and *vice-versa*.

With pain in the eye we examine carefully the upper incisor teeth, especially the canines; with pain in the ear, or at the angle of the jaw, we should suspect the third molars, especially the lower; at the same time remembering that an irritation of any one of the peripheral endings of the fifth nerve may be referred to any other peripheral termination, or along the course of a terminal branch, but that such referred pain is always unilateral. Pain from irritation of a terminal twig of the fifth nerve is never referred to the opposite side of the face.

If no cavity can be found in a tooth after the most careful examination, bearing in mind how easy it is to overlook an interstitial cavity, or one just at or below the gum margin into which the gum has grown, then any filling in the neighbourhood falls under suspicion, and we have very carefully to consider the advisability of its removal to enable us to examine the condition of the pulp or of the pulp canal; whether to remove it or not depends on the condition of the filling. If it shows the slightest suspicion of being leaky, we remove it; the old chart should be searched for, as we have no knowledge of the condition of the pulp underneath, and we know the filling can be replaced. It is only after focussing attention on each single tooth, and making sure of each individual filling, that we can turn from the dental aspects of the case to a consideration of other possible source of trigeminal irritation, or to a diagnosis of functional neuralgia.

Having localised the faulty tooth, we have a further diagnosis to make; to decide whether the pain is due to a simple hyperæmia of the pulp set up by irritation from moderate caries; whether the case is one of an acutely inflamed pulp due to its exposure through caries; or whether it is an infective pulpitis with acute periodontitis, or an alveolar abscess.

If the patient presents a swelled face, the tissues red and cedematous, and the eye partly closed, it is no doubt an alveolar abscess. On looking into the mouth we notice the tongue is furred and the breath foul. The teeth on the affected side are covered with an accumulation of food, from inability to bear a toothbrush near them. We shall find a tooth perhaps perceptibly raised above its fellows, acutely tender to touch; on gently taking it between thumb and finger, it will move quite easily in its socket, and we shall undoubtedly find a cavity, and very likely a fluctuating swelling somewhere near the apex of the root. This swelling is most often on the labial or buccal side of the teeth, but it may be on the lingual side, when there will be a bulging of the hard palate, extending perhaps to the middle line or tracking back towards the soft palate. In the lower jaw an abscess in connection with a posterior molar may form a large swelling at the angle of the jaw, and with it there is often considerable trismus.

But even when the cause of the trouble is a septic root, by no means does it always give so definite a picture. There may be no swelling and no redness; the tongue may not be furred, and the teeth are clean. Then we proceed to inquire into the character of the pain. Pain of a sharp, shooting, stabbing nature, intensified when hot or cold liquids are taken, worse when the patient gets warm in bed at night, and relieved by pressure, as by the patient grinding on it, indicates a live nerve intensely irritated, with a hyperæmic condition of the pulp. The pain is not made worse by a sharp tap, but to probe the inside of the cavity provokes the most acute pain.

On the other hand, pain in toothache of a grumbling, dull, aching character, not affected by changes of temperature, made worse by pressure, indicates a gangrenous pulp with acute periostitis. Here, on tapping the tooth, sharp pain is felt, and probing the cavity causes no pain.

If these symptoms are not definite enough, and we are still unable to arrive at a conclusion as to the condition of the tooth, the debris and decay from the cavity should be removed very cautiously and gently, widening the field of operation by breaking down with a chisel-shaped instrument the unsupported walls of enamel. Provided no more pressure is used than can be avoided, it will be possible to work right down to the pulp, if it be gangrenous, without giving the patient much pain. In the case of an inflamed pulp, on the other hand, the nearer we get down to it, the more painful becomes the operation, and without coming down to the pulp we can assure ourselves of its exact condition.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

THE PLENUM SYSTEM OF VENTILATION.

A PROPOSED METHOD FOR ITS IMPROVEMENT.

A MEANS OF SUPPLYING OXYGEN.

IN an article contributed by the present writer to the columns of *THE HOSPITAL* of May 5, 1906, he pointed out that the cause of the almost universal complaint against the Plenum system is that something appears to be wanting in the air after it has been treated and delivered to the wards.

What is wanting is a certain proportion of oxygen. It was explained that as a result of the higher temperature usually maintained in wards and elsewhere, the quantity of oxygen passing through the ward in the ventilating air-current is less than it would be under what are known as natural conditions.

In one of the articles on the "Fitting and Furnishing of Wards and Operating Theatres" which appeared in *THE HOSPITAL* of November 17, 1906, was mentioned the fact that complaints arise in operating theatres that the atmosphere becomes very warm and somewhat enervating after operations have been going on for a certain time. In the following article the writer proposes a remedy for both of these complaints. The obvious remedy for a shortage of oxygen is the addition of oxygen. The oxygen may be delivered to the ventilating air-current as oxygen pure and simple or as ozone. If it is to be supplied as oxygen, the arrangement should be a very simple one. An iron bottle of compressed oxygen, the bottle having what engineers call a reducing-valve at its mouth, a valve which enables the egress of the oxygen to be controlled at will, would be placed in any convenient position near the entrance to the duct carrying air to the operating theatre or the ward, and a pipe from the bottle would pass into the duct through an air-tight gland, and would deliver the oxygen into the air-current in the form of a spray.

THE METHOD OF MIXING.

It would be a matter of some importance that the oxygen added to the air should be thoroughly mixed with it. That is to say, every cubic inch or fraction of a cubic inch of air should have its proportion of oxygen, and not that the oxygen should pass into the operating theatre in a separate stream. The spraying would be on somewhat similar lines to those adopted in the carburettor of a petrol engine, with the addition, if practicable, of a whirling motion given to the issuing oxygen, which would probably aid the thorough mixing with the air.

For operating theatres the quantity of oxygen delivered to the air-current would be controlled by an electric switch in the theatre, very similar to those employed for starting electric motors, the contacts being marked in percentages of oxygen. The switch in the operating theatres would control an electro-magnet of the solenoid type, which would open or close the valve on the oxygen bottle in accordance with the movements of the switch. In this manner, it would be very simple for one of the nurses to turn on more oxygen, or less, as instructed by the surgeon. The supply might also be controlled indirectly by an electric signalling arrangement between the operating theatre and the neighbourhood of the oxygen bottle, where an attendant would open or close the valve, in accordance with the signals received.

The same arrangement could be applied to wards and to any individual duct issuing into a portion of the ward, the oxygen bottle being fixed at the point where that particular duct joined with the main supply.

Where ozone is employed, what is termed an ozonising apparatus would be used.

OZONISATION.

Ozone is formed by the oxidising of a small portion of the oxygen of the air whenever air passes across a space where a high-tension electrical discharge is taking place. There are several ozonising apparatus on the market, all constructed on very much the same lines. There is what is called an electrical condenser, arranged to be constantly charged and discharged from an alternating-current service at a high tension; and there is a fan, driven by an electric motor, causing air to pass through the space where the electrical discharge is taking place. The apparatus usually includes an electrical transformer, and where the electrical service is on the continuous-current system, it also includes an apparatus for converting it to alternating current. The ozonising apparatus may be placed directly in the air-current, with a by-pass allowing all, or a portion, of the air passing into the duct to avoid the ozoniser; or, as the writer would rather prefer, a separate ozonised air-current may be delivered to the air in the duct, in a similar manner to that described with oxygen. Where the whole of the air in the duct is ozonised, the by-pass would be provided with a valve controlled from the operating theatre or the ward, which would be opened or closed in accordance with the requirements, by means of an electric service, just as with the oxygen bottle; or it might be controlled by signal, an attendant opening and closing the valve as the signals ordered. Where a separate ozonised air-current was delivered to the duct, the quantity of ozonising air delivered could be controlled either by varying the speed of the fan—this being controlled from the operating theatre or the ward—or by controlling the ingress of the ozonised air to the duct by a valve similar to that described for the by-pass.

PRACTICAL POINTS.

The whole arrangement should be exceedingly simple, though certain details would have to be worked out. The quantities of either oxygen or ozonised air dealt with would be very small, and the apparatus designed to control them would also be small, and would not absorb much power. The quantity of oxygen converted into ozone by the ozonising apparatus is very small indeed. It has been given to the writer as something like three parts of ozone in one million of air. The quantity necessary under different conditions would be partly a matter of calculation and partly of experiment. Two points should be noted: the compressed oxygen issuing into the air-duct would tend to cool the air as it expanded; but this could easily be provided for, and as the quantity of oxygen delivered would be small, the cooling effect would also be small.

Both arrangements could be adapted, with a little working out, for those cases where wards, etc., are ventilated and warmed by means of radiators placed in front of gratings in the outer walls. Small bottles of oxygen, or small ozonising apparatus, could easily be fixed in such

a position that a small quantity of oxygen, or of oxonised air, could mingle with the warmed air-current passing into the ward. One form of apparatus has already been adapted for ozonising the air employed in cooling the "wort" in a brewery. The hot liquor produced by boiling the malt in water, from which beer is afterwards made—technically known as "wort"—has to be cooled before it is taken to the fermenting tun. The cooling is done very largely by evaporation, and it has been thought that, by ozonising the air employed in cooling, any germs present that may have been drawn in from the outside atmosphere would be destroyed.

The plan suggested by some of the makers of ozonising apparatus, of putting the apparatus down anywhere in a ward, and allowing it to deliver ozone to the atmosphere of the ward, can hardly be recommended. As the writer understands, before all things it is necessary, in ventilation, that the whole of the air of the ward or operating-theatre—more particularly the latter—should be dealt with.

EDITOR'S LETTER-BOX.

"DENTISTS AND ANÆSTHESIA."

To the Editor of THE HOSPITAL.

SIR,—Your article on "Dentists and Anæsthesia" was of great interest to me. In my opinion, taking into consideration the course of study through which the modern dentist undergoes, including physiology, etc., if dental students had special instruction given to them (in nitrous oxide administration) during the period of studentship, there would be no danger to the public, were there a special clause in the proposed Bill now before Parliament, permitting them to administer nitrous oxide gas, but not extending to chloroform or ether. A dental student so instructed, with his constant future association with cases of nitrous oxide anæsthesia, and clinical experience gained therefrom would be as efficient an administrator of nitrous oxide as the general practitioner of medicine. It must be admitted, however, that if this privilege was conceded under the said Bill, the tendency would be for dental surgeons to attempt the double rôle of anæsthetic administrator and operator in individual cases, which certainly is fraught with danger to the patient. If this contention is valid, then two persons being necessarily present at the extraction of a tooth under nitrous oxide, the question arises, should that second person necessarily be a qualified practitioner of medicine. In my opinion the administrator of the gas should be a person other than the operator, and either a practitioner of medicine or a qualified dental surgeon.

I am, yours faithfully,

FREDERICK W. COLLINGWOOD.

Late Anæsthetist, National Dental Hospital.

THE "BREAK-UP" OF THE POOR-LAW.

To the Editor of THE HOSPITAL.

SIR,—The rival Reports of the Poor Law Commission have now been before the public for nearly three months. The evils laid bare by both those Reports—the far-reaching demoralisation of character, the failure to cope with the destitution of literally hundreds of thousands of children, the lack of medical treatment of incipient disease, the degradation and suffering involved in the general mixed workhouse, with its mixture of good and bad, sane and feeble-minded, old and young, the waste of public money

implied by the spending of seventy millions a year by overlapping authorities, in duplicated services—are still going on. The emphatic condemnation of the "principles" of the existing Poor Law, in which both Reports concur, cannot fail to make the local administration even more confused and more divergent than it has been. It is time that those who believe in the "Break-up" of the Poor Law, the abolition of the workhouse, a systematic attempt to prevent unemployment, and the wisest possible provision for each class of persons needing public assistance should draw together and organise their forces.

It has been decided to form a National Committee to promote the break-up of the Poor Law on the lines of the Minority Report. What is desired is the co-operation of those who are willing to help in any one of the following ways: (a) By lending their names and local influence; (b) by writing, lecturing, or personally helping in organising and office work; (c) by contributing money. It is intended that subscription should be entirely optional; but funds must be raised for printing, postage, meetings, and the travelling expenses of lecturers, and those able to contribute money are requested to do so. The Committee will need £1,000 for its first year's work. One lady has sent me £50 for a start.

A meeting will be held shortly, to which all who have sent in their names will be invited, and at which an Executive Committee and officers will be appointed. In the meantime I am acting as Secretary, and I would ask all in sympathy to write to me. I am, etc.,

BEATRICE WEBB (Mrs. Sidney Webb).

41 Grosvenor Road, Westminster, May 7, 1909.

"A CRITICISM OF HOMŒOPATHY."

To the Editor of THE HOSPITAL.

SIR,—The pity of seeing such evident culture as is shown in Mr. Wheeler's letter under the above heading wasted through loyalty to a discredited generalisation, and the hope that he will reconsider his position must be my excuse for what is little more than a repetition of some facts clearly set forth in your recent leader.

"Like Cures Like."—It will be granted that a generalisation involving the momentous issues of life or death, to be accepted or indeed true, must be applicable to every particular case. Whether vaccine therapy supports this homœopathic dictum we need not discuss. Vaccine therapy is rational. It deals with the recognised and proven cause of disease—with the removal or disablement of that cause. It has to do with the infinite law of cause and effect. That is the common-sense view and the truth of the matter. Why instance it in support of a generalisation ("Like cures like") that will not hold water in the following apposite case:—

The presence of lead in certain quantity in the body gives rise to a disease with definite symptoms—paralysis of certain muscles and constipation, with severe colicky pains. If "like cures like," then lead is the remedy. And judging from similar homœopathic happenings I can well imagine that there are people who would give it, indeed, have given it.

It is difficult to think that anyone could bind himself to a principle involving such dangerous trafficking with the human body, which implies the addition of fuel to the flame, and more lead where the quantity already present is causing grave and serious mischief. This condition is, of course, properly and successfully treated by preventing any further intake of lead and promoting the removal of that present.

I am, sir, sincerely yours,

Box, Wilts, May 6, 1909.

J. H. HEANEY, M.B.

NEWS AND COMING EVENTS.

MR. ERNEST MALLAM, D.M., Magdalen College, has been appointed Litchfield Clinical Lecturer in Medicine in the University of Oxford for a term of two years from October, 1909.

LORD SANDHURST, Treasurer of St. Bartholomew's Hospital, has received from the Merchant Taylors' Company £500, being the first moiety of a further grant of £1,000 towards the building fund of the hospital.

A LOAN exhibition of pictures by Jan Steen will be held at the Dowdeswell Galleries, 190 New Bond Street, London, W., next week, in aid of the National Hospital for the Paralysed and Epileptic, Queen Square, W.C.

THE Brompton Hospital for Consumption has received from Washington cheques for one thousand dollars (£200) and five hundred dollars (£100), representing the prizes awarded to the hospital and the Frimley Sanatorium at the recent International Tuberculosis Congress.

THE Council of the Senate of the University of Cambridge has reappointed Professor G. Sims Woodhead, M.D., as a Governor of Cheshunt College for three years, and as the representative of the University of Cambridge on the Council of the Lister Institute of Preventive Medicine.

MR. CHARLES JOHN WHITTINGHAM, of Chingford, who died on March 19 and left estate valued at £14,231 gross, bequeathed £250 to Guy's Hospital. He also left to this hospital the ultimate residue of his property, subject to the life interest of his wife and to other interests.

The fourth annual meeting of the Convalescent Homes Association will be held at 32 Sackville Street, W., on Thursday, May 20, at 4.30 P.M., Sir William S. Church, Bart., K.C.B., M.D., in the chair. The report for the year 1908 will be submitted, and the object and work of the Association will be explained.

THE course of eight lectures on the "Structure and Functions of the Central Nervous System" given in the Physiological Institute of University College by Dr. W. Page May on Tuesdays at 5 P.M., which commenced on May 11, are open to all students of London University, as well as to medical men on presentation of their cards.

THE Executive Committee of the British Institute of Social Service, 11 Southampton Row, W.C., has organised a Conference, to be opened by the Lord Mayor of London, on "Some Aspects of the Report on the Royal Commission on the Poor Laws and Relief of Distress," to be held in the Guildhall Council Chamber, by the kind consent of the Common Council, at 11.30 A.M. and 3 P.M. on Tuesday and Wednesday, May 18 and 19, 1909.

THE annual general meeting of the Poor-law Medical Officers' Association of England and Wales will take place this year on July 6 at the Guildhall, London, and a conference will be opened there on the report of the Royal Commission on Poor-law Medical Relief. The Lord Mayor has promised to open this conference at 11 A.M. in the Council Chamber of the Guildhall. All Poor-law medical officers in England and Wales are invited to attend, and any desiring to read papers at the conference should send preliminary abstracts to the honorary secretary of the Association, Dr. M. Greenwood, 243 Hackney Road, London, N.E.

THE eleventh meeting of the departmental committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on May 5, Mr. Almeric W. FitzRoy, the Clerk of the Council, presiding. Evidence was tendered on behalf of the British Medical Association by the following witnesses:—Mr. J. Smith Whitaker, M.R.C.S., L.R.C.P., Medical Secretary of the Association; Mr. C. E. S. Flemming, M.R.C.S., L.R.C.P., Bradford-on-Avon; Dr. L. S. McManus, Wandsworth; and Mr. J. H. Taylor, M.B., Salford.

UNDER the will of the late Mr. E. Homan, of Lyme Regis, Dorset, St. Bartholomew's Hospital will receive £1,000 towards the Samaritan Fund, and the Finchley Cottage Hospital will receive a like amount for endowment purposes, as well as £500 towards the Samaritan Fund. The late Mr. R. Haslam, of Burnley, has bequeathed to the Victoria Hospital, Burnley, £500 for the endowment of a cot. The late Miss A. E. Wheeler, of London, bequeathed £1,000 each to the National Hospital for the Paralysed and Epileptic and to the Royal Hospital for Incurables, Putney.

ST. BARTHOLOMEW'S HOSPITAL.

OPENING OF THE NEW PATHOLOGICAL BLOCK.

THE Lord Mayor, on Friday, May 7, opened the new pathological block at St. Bartholomew's Hospital, a description of which will shortly appear in THE HOSPITAL with accompanying plans. The Lord Mayor, who was accompanied by Miss Nancy Truscott and the Sheriffs, was received on arrival at the hospital by Lord Sandhurst (the treasurer), the almoners, and the senior members of the medical and surgical staff, with Mr. C. Hayes (the clerk). After inspecting the new building the party proceeded to the great hall, where a large company had assembled. Lord Sandhurst read an address to the Lord Mayor signed by himself on behalf of the governors, which dealt with the long and intimate historical associations which have existed between successive Lord Mayors and Corporations of the City of London and the hospital of St. Bartholomew since before the time of Sir Thomas Gresham; and pointed out the advantages to the community which must follow the opening of this new wing. The Lord Mayor, having received the key from Mr. E. B. P'Anson, the architect, declared the new building open. He said the opening of the pathological block would mean an era of increased usefulness of the hospital. The great advances in curative and preventive medicine during the last twenty years have been largely due to the study of pathology. He hoped that the studies carried on in the new building would lead to some discovery concerning the treatment of cancer and tuberculosis. Assisted by the City guilds and the merchant princes of London, the Corporation had often helped St. Bartholomew's in the past; and the Lord Mayor expressed his intention of calling the attention of the guilds, the merchants, and the public generally, as well as of the Corporation, to the present financial necessity of the hospital, arising out of the desire of the governing body that the institution should be brought up to date, and made what it ought to be—one of the best hospitals in the world. The Prince of Wales, the President of the hospital, had assured him of his keen interest in the institution and in the present state of its finances.

SIR ROBERT BOYCE, who was sent by the Colonial Office to the West Indies to study tropical sanitation, has written a letter home in which, according to the *Times*, he states that immense progress has been made since 1905 in regard to tropical sanitation and to mosquito-borne diseases. Now all the health authorities prosecute and inflict heavy fines for having larvæ of mosquitoes on premises or in houses. The teachings of tropical medicine have taken root and have brought about a revolution in tropical sanitation, and, above all, every one sees now how practicable it all is and what a return they get for any small action they may have made. In another ten years diseases like yellow fever and malaria will be things of the past in islands like the West Indies and in many other parts of the tropical world. If it had not been for the impetus which the Liverpool School of Tropical Medicine in the West Indies has given to the study of these diseases, we could not have accomplished what has been done.

At the quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men, held last month under the chairmanship of Dr. Blandford, President, it was reported that since the last meeting three members of the court of directors had died: Mr. T. Laurence Read, Vice-President, and Dr. Eastes and Dr. Chas. Baker, and votes of condolence with their families were passed. Membership of the Society is open to any registered medical practitioner who at the time of his election is resident within a twenty-mile radius of Charing Cross. The subscription is two guineas per annum, and the Society confines its assistance to the widows and orphans of deceased members. The offices of the Society are at 11 Chandos Street, Cavendish Square, W., and information may be obtained from the Secretary at that address. The invested funds of the Society now amount to over £100,000. The annual general meeting will be held on Thursday, May 20.

A FESTIVAL dinner in aid of the funds of the City of London Hospital for Diseases of the Chest was held last week at the Trocadero Restaurant. The Lord Mayor, who was accompanied by the Sheriffs, presided, and in proposing "Prosperity to the Hospital," said that since its foundation upwards of 41,000 people had visited it as patients, and that 750,000 out-patients had received treatment. Last year about 1,150 cases were treated in the hospital, while 57,000 out-patients were dealt with. Every bed in the hospital was now occupied for the first time in its history. Mr. H. H. Nelson, responding, urged that money given to charities should not be liable to the payment of income-tax. He put that forward as something which the Government might reasonably consider. Mr. Alderman and Sheriff Hanson proposed "The Medical Staff," and Dr. Heron responded. The secretary announced donations and subscriptions amounting to upwards of £2,300.

YEAR by year the circulation of *Printers' Pie* has grown, and by the sale of the new issue, which appeared on May 12, Mr. Spottiswoode hopes to be able to provide a larger contribution than before to the funds of the Printers' Pension Corporation, on whose behalf it is produced. This year's president of the corporation is the Prince of Wales. In addition to the Printers' Pension Corporation, the Booksellers' Provident Institution, the News-vendors' Benevolent and Provident Institution, the Newspaper Press Fund, and the Artists' General Benevolent Institution will benefit by the sale of the annual. The following authors and artists, among others, have helped in the production: The Duke

of Argyll, G. B. Burgin, Egerton Castle, Lieutenant-Colonel Newnham-Davis, Austin Dobson, Tom Gallon, Keble Howard, W. S. Maugham, Baroness Orczy, Barry Pain, Mostyn T. Pigott, William Le Queux, Frank Richardson, W. Pett Ridge, Adrian Ross, Owen Seaman, and George R. Sims. There are also pictures by Cecil Aldin, G. D. Armour, H. M. Bateman, Lewis Baumer, George Belcher, H. M. Brock, Tom Browne, René Bull, Dudley Hardy, W. K. Haselden, John Hassall, L. Raven Hill, George Morrow, Will Owen, F. Pegram, E. L. Stampa, Lance Thackeray, Thorpe, F. H. Townsend, Lawson Wood, and Starr Wood. The price of *Printers' Pie*, 1909, is 1s., and it is published by the Sphere and Tatler, Ltd.

FOOD CONGRESS AT PARIS, 1909.

THE successful Congress in connection with the suppression of frauds in food held last year at Geneva, will be succeeded by a similar Congress to be held in Paris during October of the present year. The Congress is under the auspices of the Society of the White Cross of Geneva, presided over by Mr. C. H. Vuille of that city, and it is contemplated that the forthcoming Congress will, numerically, far exceed that which was held at Geneva, when about 400 delegates, representing 29 different nations, were present. At the Paris Congress, the principal object will be to define methods to prevent the fraudulent adulteration of food, but there will also be sections devoted to chemical products, pharmaceutical preparations, mineral waters, and similar substances. The list of foods includes all the various well-known domestic products. There will be two principal sections—technical and industrial—and those two sections will endeavour to define clearly what purity of the various substances discussed really means. It is obvious, also, that the combination of technical and scientific men along with actual producers is likely to lead to clear and practical definitions. It is anticipated that there will be a considerable representation of British interests in connection with the technology and science of the subject, as well as in connection with agriculture and manufactures of food products. Those who intend to participate in the Congress, either by the appointing of delegates or as individuals, should apply for information to Mr. Loudon M. Douglas, College of Agriculture, Edinburgh. The General Secretary is Mr. Robert Fazy, 42 Rue du Rhone, Geneva.

OBITUARY.

THE death is announced, at the age of seventy-five, of Dr. Manuel Amador Guerrero, a former President of the Republic of Panama. Dr. Guerrero was a physician, and he had the especial honour of being elected first President of the Republic shortly after its declaration of independence at the close of the year 1903. He held the post of President for the statutory term of four years. Dr. Guerrero visited Europe in 1907, but did not come to London.

News has lately been received in London by telegram of the death of Dr. John Thomson, a prominent medical officer practising at Brisbane, Queensland, at the age of sixty-one. Dr. Thomson graduated in 1871 at the University of Edinburgh, and settled in Brisbane over thirty-three years ago. He identified himself chiefly with matters relating to sanitary science, on which he soon came to be recognised as an authority. He was President of the Royal Society of Queensland, and his colleagues elected him President of the Intercolonial Medical Congress in 1899. In addition to other appointments, he was an honorary associate of the Order of St. John of Jerusalem and colonel and principal medical officer of the Commonwealth military forces of Australia.

NURSING ADMINISTRATION.

A NATIONAL UNDERTAKING IN DIFFICULTIES.

QUEEN VICTORIA'S Jubilee Institute for Nurses is an association of which the country is justly proud. Founded by the late Queen, it has always been the object of special interest to the Royal Family, and has enjoyed in no common degree the honorary services of eminent philanthropists and financiers, no less than that of experts in the departments of social life with which it is concerned. It would be difficult to point to a better administered charity, or one which commands more universally the public confidence. Hence the note of depression sounded by the report recently issued over the signature of Lord Goschen is very remarkable, pointing as it does to alterations in conditions under which the work is carried on such as ought not to be ignored.

The financial position of the fund is still matter for grave anxiety. The result of the special appeal made in 1908 wiped out the deficit for that year, and the balance will be sufficient to meet the demands made upon the Institute's resources during the present year. But the treasurer warns subscribers that there will again be a serious deficit in the annual income in 1910. If this were all there would be no need for real anxiety. Many excellent and prosperous societies live from hand to mouth, and the influential character of the council leaves it improbable that funds will be lacking for necessary extensions. The crux of the matter lies in the record of work accomplished. The primary object of the Jubilee Institute is to supply nurses for work among the poor. The methods employed are to procure candidates qualified by three years' training in general hospitals or in Poor-law Infirmarys, and to give them an extra year's training at some centre for district work where Queen's nurses are employed. Formerly the fee paid by the Institute for a year's training was £28, but this fee was last year reduced to £20. The number of nurses trained through the agency of the Jubilee Institute during 1908 was 211, of whom 30 were trained for midwifery, seven in hospitals, and 174 in district work after general training. Including 33 Queen's nurses who rejoined the Institute after having resigned, the number of nurses enrolled during 1908 was 241. This number is very far from adequate to the requirements. There are 829 nursing associations affiliated to the Jubilee Institute and employing or desirous of employing Queen's nurses, but 37 associations severed their connection with the Society chiefly because the Institute was not in a position to supply Queen's nurses for their needs. There is a shortage of suitable candidates willing to accept the benefit of free training offered by the Institute. And there is also a shortage of vacancies in the training centres, although this has been to some extent overcome by recent negotiations. This is not all.

The number of resignations every year about equals the number newly trained. In 1908 211 women were trained, while 203 resigned, the resignations amounting to 13.8 per cent. of the total number of Queen's nurses employed. This is no

abnormal year, for in 1907 the figures were much the same. The nursing profession is always in a state of flux, but, even including deaths, the rate of falling off in societies and co-operations ought not to exceed 10 per cent. If the resignations were for the most part from nurses who had borne the burden for many years, it would be comprehensible. But particulars are given of the nurses who resigned, and it appears that only 36 out of the number, or 17.7 per cent., had remained in the service of the Institute as long as six years, while no fewer than 55, or 27 per cent., failed to complete even two years' service after the expensive training given them.

The Institute is face to face, then, with a situation of extreme difficulty. The Chairman of the Council stated, in commencing his report, that "early in 1908 the position became critical. It was a question whether the Institute could follow its hoped-for line of development into a national work, or whether it must be restricted to its existing and comparatively narrow limits." This question the Council is hopeful of having solved by inducing training centres to receive more candidates. But, it will be asked, is not some more fundamental alteration necessary if the work is to lead the way as it ought to do in organising the nursing of the sick poor? Out of the £11,296 expended last year, nearly £5,000 was devoted to giving 211 fully trained nurses experience in district work, preliminary to their becoming Queen's nurses, and out of this number it may be reckoned that about 27 per cent. will continue only a year in the posts which are found for them. Judging by the figures given in the last two reports, by the end of next year there will remain at work only about half the number of those who have been trained at this cost, and in six years' time nearly all will have melted away into other callings. Is the Institute trying to force up the standard higher than the conditions of district work will admit? Are they endeavouring to secure women for these posts by the promise of free training who find subsequently that they can make a better living in other directions? We hope it may prove that other causes are at work than the one we have indicated as possible, for the maintenance of a high standard of training in district work is indeed a matter of national importance. At the same time, facts ought to be faced. The tendency among district nurses is to remain almost as fixtures in the towns and villages where they once settle down, and the reasons for these resignations ought to be investigated by the committee.

There is yet another vital matter to be considered. Is there a certain amount of overlapping going on in connection with the admirable inspection work of the Institute? Inspection and superintendence cost the Society last year £2,714, and we learn from the report that this amount is likely to be considerably increased this year. Might not some of this work be conveniently reorganised by means of co-operation with the County Councils?

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, MAY 17 TO MAY 22.

THE THROAT HOSPITAL, Golden Square, W.

At 5.30 p.m.

May 17, Mr. Parker, **Chronic Inflammatory Affections of the Middle Ear.**

May 20, Mr. Parker, **Otosclerosis.**

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

May 17 and 20, Surgical Registrar, **Demonstration.**

May 21, Medical Registrar, **Demonstration.**

At 12 noon.

May 17, Dr. Bernstein, **Pathological Demonstration.**

At 12.15 p.m.

May 19, Dr. Pritchard, **Practical Medicine.**

At 5 p.m.

May 18, Dr. Moullin, **Gynæcology.**

May 19, Dr. Low, **Insects as Carriers of Disease in Tropical Medicine.**

May 20, Dr. Cole, **Melancholia and Allied Conditions.**

May 21, Mr. Harman, **How to Test the Vision of an Injured Eye—Workmen's Compensation.**

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 5.15 p.m.

May 17, Dr. Alexander Morison, **The Treatment of Cardiac Pains.**

May 18, Dr. G. E. Herman, **Some Points relating to Ectopic Pregnancy.**

May 19, Sir Thomas Oliver, **Some Unusual Features of Lead Poisoning.**

May 20, Dr. James Mackenzie, **A Demonstration of Graphic Methods for the Investigation of Cardio-Vascular Conditions.**

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

May 18, Dr. G. N. Meachen, **Demonstration of Selected Skin Cases.**

May 20, Dr. A. G. Auld, **Pulmonary Emphysema.**

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich, S.E.

At 2.15 p.m.

May 21, Dr. R. Bradford, **Hemiplegia.**

THE FORTHCOMING SIXTEENTH INTERNATIONAL CONGRESS OF MEDICINE, BUDAPEST.

THE detailed arrangements for the sixteenth International Congress of Medicine are now issued, with a list of the Committees and a programme of the communications promised to the sections. The meetings of the Congress will be held in the buildings of the former Polytechnic School Museum—korut 6/8, but the formal opening will take place in the Banqueting Hall of the Municipal Redoute at 11 a.m. on Sunday, August 29, 1909. The closing ceremony will occur at the same place on September 4, 1909, at 10 a.m. Six general sittings will be held during the Congress, at which addresses will be delivered by Professor Baccelli, of Rome; Dr. Bashford, of London; Professor Kutner, of Berlin; Dr. Laveran, of Paris; and Mr. J. Loeb, of Berkeley, U.S.A. A Journal will be issued daily, and there will be the usual secretarial offices and bureaux. Three new sub-sections have been formed—namely, orthopaedics, professional hygiene, and school hygiene.

The General Secretary calls attention to the difficulty of finding adequate accommodation for intending visitors to Budapest unless they give timely notice to "The Central Travelling Ticket Office, iv. Vigadó-ter 1, Budapest, Hungary," and secure rooms by paying for them in advance. Certain concessions will be allowed by the railway companies to members attending the Congress. In Hungary the railways allow a reduction of 50 per cent. In France the management of the State railways and the East, North, and Orleans Companies also allow a 50-per-cent. reduction to members provided with the proper vouchers, whilst in England the G.E.R. grants a reduction to Congress members. Members of Congress who have paid their subscriptions will receive a circular about the end of May informing them of the method of claiming these reductions.

The Executive Committee offer six excursions for members after the Congress, each excursion being personally conducted and upon the ordinary inclusive terms, the first-class prices admitting of a single bedroom in hotels, whilst those who pay second class will be lodged in couples. The first excursion costs 150 crowns first class and 135 crowns second class (a crown is equivalent practically to a shilling). It includes a visit to Kolozsvár, the ancient capital of Transylvania, the Marosújvár salt-mines, and the Rév Pass. It leaves Budapest on September 4, and returns on September 7. Excursion No. 2 is to the High Tatra, Dobšina Ice Cavern, and Postyen Baths, leaving Budapest on September 4, returning September 9. Price 180 crowns first class, 150 crowns second class. Excursion 3 is to Lake Balaton, which is one of the largest and most beautiful in Europe. Members leave Budapest on September 4 and return on the 6th. Price 130 crowns first class, 110 crowns second class. Excursion No. 4: The Lower Danube and Herkulesfürdő, leaving September 4, returning September 8. Fare, 185 crowns first class and 155 crowns second class. Excursion No. 5: Constantinople, leaving Budapest September 4 and returning September 13. Price 475 crowns first class and 375 crowns second class. This excursion requires passports *viséd* at the Turkish and Roumanian Consulates. It allows five days in Constantinople. The excursionists having visited Constantinople may return *via* Trieste by putting into Athens and Corfu, the additional price being 425 crowns. Constantinople is left on September 11, and Trieste is reached on September 16. Excursion No. 6: Bosnia, Herzegovina, Dalmatia, and the Hungarian Littoral, leaving Budapest on September 4 and returning on September 12. First class, 320 crowns; second class, 270 crowns.

The latest date of entry for any of the excursions is August 1, and in each case a booking fee has to be paid varying from 25 to 50 crowns, which is not repayable under any circumstances. Some of the excursions are necessarily limited in number, so that early application is desirable. So far as can be told at present, the Congress appears to be viewed with favour by the medical men of the United Kingdom, for it has secured a larger number of adherents than any of the Congresses since the one held in Paris. Communications should be addressed to the Honorary General Secretaries for Great Britain, Dr. Clive Rivière and Mr. D'Arcy Power, at 10a Chandos Street, Cavendish Square, London.

THE HOSPITAL

May 15, 1909.

Name

Address

This Coupon must accompany manuscript or contributions intended for THE HOSPITAL.

The Hospital

A JOURNAL OF

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SATURDAY, MAY 22, 1909.

TUBERCULOSIS IN INDIA.

THE *Indian Medical Gazette* for April contains a number of communications dealing with tuberculosis in India, being papers read before the Medical Section of the Asiatic Society. These papers remind us that India, in addition to being well supplied with her own particular tropical plagues, shares more amply even than ourselves in the visitations of the tubercle bacillus. The contributors all unite in deploring the inaccuracy of the statistics upon which they are forced to found their arguments; but with all allowances, it is clear that tuberculosis is very rampant in India. For example, 4 per cent. of all cases admitted to the General Hospital in Calcutta are admitted for tuberculosis. Again, the post-mortem records of the Medical College, Calcutta, go to show that evidence of tuberculosis was forthcoming in 25 per cent. of all bodies examined, while this disease was the actual cause of death in 17 per cent. Another writer states that the mortality from tuberculosis in Calcutta ranges from 2 to 3 per 1,000, while in Bombay City it reaches nearly 4 per 1,000. Comparison of this with our own figures—namely, 1.9 per 1,000 for England and Wales in the years 1901 to 1905—will bring home the horrible ravages of the disease in India.

Knowing what we do of the conditions which favour the spread of tuberculosis in communities, it is easy to believe that India offers many advantages to the tubercle bacillus. The population is intensely ignorant of hygiene, lives poorly, and exhibits (perhaps in consequence) a very limited resistance to pathogenic germs of various kinds. Moreover, overcrowding is even more habitual there than it is in our own slums, while the religious customs of a large section of the people involves a more or less close confinement of its female members. How efficient is this last item in promoting tuberculosis is well brought out by figures given by Mr. T. F. Pearse touching the ratio of mortality among men and women respectively. In Calcutta the mortality from tuberculosis is about 2 per 1,000 for males, but for females $3\frac{1}{2}$ per 1,000. Further, Mahomedan women suffer much more than their Hindu sisters, the death-rate among Mahomedan women reaching nearly 6 per thousand. Nor is this high mortality confined to

town dwellers. Mr. Chatterjee, assistant bacteriologist to the Medical College, Calcutta, asserts that it is as high in villages as elsewhere, and attributes the prevalence of the disease to the way the lower classes live, "huddled together in small huts around which dense vegetations are grown to effectually exclude light and air." An interesting point brought forward by this writer (and others) is the relative infrequency in India of those forms of surgical tuberculosis which are so common with us. This he attributes to the universal custom of boiling milk before using it as food. "So far as my knowledge goes," he says, "I have never seen anyone among our countrymen who uses unboiled milk unless it be on the express advice of medical men." There appears to be a consensus of opinion that surgical tuberculosis (that is, disease of bone and lymphatic glands in particular) is undoubtedly less common in India than it is with us. If the additional observation touching the universal custom of boiling milk is found to be justified, the conjunction will afford strong support to the often-suggested view that the surgical forms of tuberculosis depend in the main upon infection with the bacillus of bovine tuberculosis. In any case the evidence is good enough to stimulate precautions against the access of bovine bacilli to the human body.

The general conclusions drawn from the various papers read before the Section were that tuberculosis was a far greater scourge to Bengal than any purely tropical disease, and that there was urgent need for the provision of sanatoria for early cases. This, of course, is true enough, but it surely represents a very low ideal. It may be that ignorance of local conditions prompts the indulgence of impracticable aspirations, yet we should have been glad to see some expression of the patent fact that the extirpation of tuberculosis is not to be attained by the patching of invalids, but by the diffusion of knowledge concerning the means by which the disease is spread. Perhaps the speakers felt that under existing circumstances they were justified in merely bewailing the ignorance of the people, but to an outsider it appears a somewhat feeble proceeding. Now that the numbers of Indians who are not only educated, but medically educated, is

becoming so considerable, it ought not to be impossible for them to institute a campaign for the teaching of their compatriots, particularly in the large towns. No one disguises the difficulty of the business, least of all those of us who have done our best to instil hygienic notions and the main data touching tuberculosis among our own poor. Even with our own relatively educated masses, it is an exasperating and discouraging task to attempt to urge the virtues of ventilation and cleanliness with regard to spitting. With such a population as that of India, the difficulties and discouragements must inevitably be multiplied many fold. Nevertheless, the doing of the thing is of prime importance, though progress be never so slow. We have heard much of late of the intellectual advances of the natives of India, and are quite content to credit their claims. The leaders of the community, both medical and lay, cannot find a better way of justifying their title to look after themselves than

by combining to make a serious assault upon that ignorance which is the greatest bulwark of tuberculosis. The assault, if made at all, must be made, one imagines, by those who combine a self-sacrificing devotion to the cause with an intimate knowledge of the character and customs, fads and fetishes, of the uninstructed multitude. If this be true, the task must fall upon the shoulders of educated natives rather than upon the English, at least in so far as the actual proselytising of the people is concerned. It should not be impossible, though here again we speak with diffidence, to establish something after the fashion of Lady Aberdeen's travelling lecturers, who did such good work in Ireland, and we commend the suggestion to those who have local knowledge. Sanatoria are blessings which we are far from under-rating, but they barely touch the root of the evil. The natives of India can learn thus much from the experience of these islands.

THE GROUNDWORK OF EUGENICS.

WE certainly think that the appearance of a body of students calling themselves "Eugenists" is as opportune as their name is barbarous. Professor Karl Pearson, who may be looked upon as their governing director, has been at considerable pains to set forth, lucidly and in non-technical language, the objects of the workers at the Eugenics Laboratory. He states, as the foundation of the Eugenic structure, the following claims: (1) "We depart from the old sociology, in that we desert verbal discussion for statistical facts; (2) We apply the new methods of statistics, which form a practically new calculus; (3) We start from three fundamental biological ideas: (a) That the relative weight of nature and nurture must not *a priori* be assumed, but must be scientifically measured; and thus far our experience is that nature dominates nurture, and that inheritance is more vital than environment. (b) That there exists no demonstrable inheritance of acquired characters. Environment modifies the bodily characters of the existing generation, but does not modify the germ plasm from which the next generation springs. (c) That all human qualities are inherited in a marked and probably equal degree."

These statements we may take to be the fundamental conceptions of Eugenic doctrine, and before criticising them, it may be as well to pass on to the conclusions at which Professor Pearson inevitably arrives. In the first place it is clear that for him selection of good parents—by which term "good" we must imply vaguely those with qualities beneficial to national progress—is the only means of saving a nation from deterioration. By artificial means the selective force of death is impaired, and opportunity is given for those to reproduce their kind who, in a less enlightened society, would have succumbed at an early age. With regard to the first claim, we rather regret to find that this abstinence from dis-

cussion is not universal among the disciples of the school of "Eugenists." Already we have had one or two publications, written by a professional journalist, which are likely to do far more harm than good. The present form of Eugenic publications seems to answer its purpose adequately, and to us it is a vital point that they should be written by the people who are specially engaged in this work, and not by the facile pen of the dilettante. The second claim is not entirely satisfactory, for we all know how statistics can be used or abused. Nevertheless, we feel that Professor Pearson will be honest and merciful, as behoves a trained mathematician. The three fundamental biological ideas seem to present a wealth of controversy, which, we fear, could not be avoided. It is useless to revive old questions about the real meaning of "acquired characters." Lamarck himself particularly says that the theory of acquired characters does not apply to man, and even if it did, we should require data extending from at least two thousand years ago to the present day in order to prove any one case.

The theoretical aspect of Eugenics, so far as concerns the selective force of death, the differential birth-rate, and the instability of society as a whole, seems to rest upon very firm ground. But we do not think that the biological ideas can be accepted without reservations. On the whole, therefore, we are heartily in accord with Professor Pearson's view of the importance of Eugenics to the State, and the need for education of the general public in the elements of race-culture. There can be no doubt that the careful compilation of pedigrees, both of normal and of abnormal people under similar conditions, will be invaluable to future statesmen as a basis for legislative action. In the case of disease, the work is already in progress, and we trust that no field will be left uninvestigated in which valuable social information may be brought to light. But the work must of necessity be slow and very accurate before the conclusions of the laboratory can be translated into practical measures.

ANNOTATIONS.

School Clinics.

THOSE acute observers who predicted that the medical inspection of school children was but the point of a wedge whose ultimate effect must be free treatment of the pathological conditions found, seem likely to be speedily justified. The problems of racial degeneration, of the relations of physical ill-health and of mental and moral deterioration, of heredity, crime, alcoholism, and many other detrimental conditions, are much too large to be discussed otherwise than at great length. But it is interesting to observe that the recommendations of the Education Committee of the London County Council in the matter of subsidies to hospitals and dispensaries do not by any means command unanimous support on that committee. Indeed, the majority of a special sub-committee appointed to consider the matter were in favour of the formation of school clinics. The dilemma with which public bodies having the responsibility of looking after the youthful proletariat are faced can be put almost in a nutshell. Owing partly to the ignorance, uncleanly and improvident habits, carelessness, overcrowding, poverty, bad feeding, and many other factors of the life of the poor (in towns especially), their children suffer from a large variety of entirely preventable causes of ill-health. While prophylaxis is what must eventually be aimed at, the treatment of that which now exists must also be undertaken if the nation's most valuable asset, the efficiency of its governing class, is not to be seriously impaired. This treatment, as, for instance, of dental caries, otorrhoea, errors of refraction, and many others of the commoner lesions, demands skilled medical attention of a kind which the parents unaided are nearly always unable to provide. The alternatives are: to extend the present hospital and dispensary system by subsidies, to start school clinics, and to do nothing. The last is out of the question; the second is very expensive, the first is regarded by the British Medical Association as an extension of a system of sweating already unbearable. Moreover, the majority of the special committee believe that the expense of any workable system of subsidies would be greater than that of the establishment of clinics, and that the practical efficiency of the scheme would be less.

The Stage and Medical Charity.

A FEW months ago we recalled the fact that both Medicine and the Drama may claim Sir Charles Wyndham as a member of their ranks. We did not then say—as was well known to us and many others, that this distinguished actor has always retained a practical interest in his former profession, and has often aided in the furtherance of medical charities. This friendly co-operation and sympathy between the stage and the hospitals is again brought prominently before our notice by the publication in the *Times* of May 18 of recent correspondence between the Hon. W. F. D. Smith, chairman of King's College Hospital, and Sir Charles Wyndham, President of the Actors' Benevolent Fund. The former in his letter explains that for some time past the committee of management have wished to acknowledge suitably their deep obliga-

tion to the theatrical profession for the unvarying kindness with which its members have freely given their services on many occasions on behalf of the hospital. Realising that they cannot adequately express their gratitude to individuals, they have decided, as a permanent token of recognition of the friendly help which they have received, to invite the committee of the Actors' Benevolent Fund to name a bed in the New King's College Hospital now being erected on Denmark Hill, and also to nominate a member of the theatrical profession for election as an honorary life governor of the hospital. Sir Charles Wyndham's reply expresses warm appreciation of the honour proposed to be conferred on the Fund by the Hospital, and of the generous and graceful terms in which it was conveyed. "Whatever services the stage has been privileged to render to medicine are no more than a just tribute to the unstinted beneficence invariably extended by your profession to theirs." The bed in the new hospital will most appropriately be christened in the name of Henry Irving; while the committee of the Actors' Benevolent Fund has nominated Sir Charles Wyndham as an honorary life governor of the hospital. Both decisions cannot fail to receive general approval from the members of both professions, and of the hospital with whom the idea originated.

St. Bartholomew's and the City.

LAST week we gave a short account of the recent Ceremony at St. Bartholomew's Hospital, when the Lord Mayor opened the New Pathological Block of that institution. The new buildings are strikingly well adapted for the routine hospital investigations, for the instruction of the clerks and dressers in pathological methods, and for higher research into the problems of disease. The Lord Mayor made sympathetic reference to the unbroken relations, through nearly eight centuries, between the City of London and its great General Hospital—the only one within the City boundaries. While showing clear appreciation of the worldwide benefits which will issue through the work of this new and elaborate centre of medical research, the Lord Mayor also spoke with knowledge and feeling of the grave financial embarrassment which now threatens the hospital. Unless active and generous help is soon forthcoming this great and ancient institution will be crippled to an extent scarcely yet comprehensible to those who have always thought of it as a monument of wealth and stability. Following the Lord Mayor's speech and the ominous announcements in the first annual report of Lord Sandhurst, the new treasurer of St. Bartholomew's, the former called a meeting on May 14, at the Mansion House, of the Masters and Wardens of the leading City Companies, to confer with them upon the financial crisis which has befallen their hospital. A letter was then read assuring the Lord Mayor that the Prince of Wales, as President of the Hospital, is alive to its urgent needs, and earnestly hopes that the City will see to it that the work of its one general hospital is not curtailed for the first time by lack of income. We propose to consider this grave state of affairs in an early number of THE HOSPITAL.

MEDICAL OPINION AND MOVEMENT.

SINCE Blood Counts, and especially leucocyte counts, were advocated a few years ago by many surgeons as an aid in the diagnosis of various forms of suppuration, a great deal of research has been published on the value of leucocyte counts in Appendicitis. As a general rule the conclusions reached have been strongly in favour of trusting to this method of gauging the progress towards resolution or the reverse of inflammatory affections in this viscus; but notwithstanding this the most practical and experienced surgeons, in Britain at least, have fought distinctly shy of the method. The enthusiasm of the clinical pathologist for strictly laboratory methods of diagnosis is well known, and may possibly explain why the apparently clear and definite indications of the leucocytes are so little regarded by clinicians pure and simple. Dr. Pease has recently contributed to the *Annals of Surgery* an elaborate re-investigation of the matter based on a series of 300 consecutive cases, and he comes to conclusions which are worth the attention of those who have to treat appendicitis. All that can be said from leucocyte counts alone is, he believes, that the majority of cases with over 15,000 leucocytes per cm. are severe, and the majority under 15,000 are mild; but there are so many cases of both types that do not conform to the rule that he prefers to rely on the other signs of the case. Similarly he pronounces against Dr. Gibson's rules based on the proportions of the total number of leucocytes to the percentage of polymorphonuclears, and against other systems of interpreting blood counts in appendicitis. It is best, he thinks, not to draw any hard and fast rules from blood counts.

THE suggestion has recently been advanced that the mysterious condition of Retro-bulbar Optic Neuritis may sometimes be caused by inflammation and suppuration of the accessory sinuses of the nose. At a recent meeting of the Laryngological Section of the Royal Society of Medicine two patients were shown by Dr. Dundas Grant in whom obstinate retro-bulbar neuritis appeared to be beneficially affected by removal of hypertrophied turbinates for the bettering of access to the sphenoidal and posterior ethmoidal cells. Dr. Logan Turner, at a discussion last July at the British Medical Association's Sheffield meeting, was almost disposed to regard these sinuses as accessory to the orbit rather than to the nasal chambers, and pointed out the direct intercommunication of veins, which exists. Professor Onodi, who has investigated the anatomy of the osseous partition between the sinuses and the optic canal, reports actual dehiscence in this septum in more than one per cent. of individuals; and the bony partition is often of extreme thinness, especially when it is formed by the wall of the posterior ethmoidal cell. Dr. Hawthorne, in discussing Dr. Grant's cases, emphasised the difficulty in explaining how a sinus abscess affecting the optic nerve can pick out the maculo-papillary bundle alone. Fuchs would assume a peculiar vulnerability of these fibres, connected with their especially delicate function; but this solution of the problem can scarcely

be described as convincing. Dr. Dundas Grant sums up his article on the subject in the *Journal of Laryngology, Rhinology, and Otology* by concluding that in all cases of this affection, not subsiding spontaneously nor due to disseminate sclerosis, the nasal condition should be carefully considered.

MR. H. W. M. GRAY describes in the *Medical Magazine* his experience of some of the recent modifications in the Operative Treatment of Varicose Veins which have been invented by American surgeons. The underlying principle of all these procedures, the first of which was introduced by Keller in 1905, is the extraction of the whole length of a varicose vein without the necessity for a long incision. The method which Mr. Gray finds most useful is that of W. W. Babcock, published nearly two years ago. A thick flexible copper wire of twenty-six inches length is used, and it is provided with acorn-like expansions at either end. A short incision is made over the saphenous vein near the saphenous opening, and the vein is lifted out and clamped. Distally to the forceps an incision is then made into the vein, and the smaller of the two bulbs of the extractor is at once slipped in: this prevents hæmorrhage. The instrument is then pushed down the vein carefully, and by a little manipulation can often be made to pass down to the ankle. When the upper bulb is nearly engaged, the vein is ligatured tightly round the copper shaft just below it; another ligature is applied above the pressure-forceps, and the vein is cut below them. The lower bulb is then located and cut down on: the vein is clamped and cut below it, the bulb pushed out and traction made upon it. In this way the whole vein is forcibly pulled out of the lower incision, the tributaries being torn across about an inch from the junctions with it. Hæmorrhage is slight and easily controlled by pressure. The operation is contra-indicated for thrombosed or very thin veins, but otherwise Mr. Gray reports favourably upon it.

THE Determination of Arterial Blood-Pressure by hæmomaneometric instruments has become so common that especial interest attaches to certain observations of Dr. O. K. Williamson lately communicated to the Royal Society of Medicine. It is found that in the case of those with normal or sub-normal blood-pressure the readings are practically identical whether the arm or leg be selected for the determination; the average difference is but 2 mm. of mercury. In those, however, with high blood-pressure the (systolic) readings taken from the leg are much higher than those from the arm; the average difference is 32 mm. Furthermore, the higher the blood-pressure the greater is the difference between the limbs in this respect. On the other hand, the diastolic readings reveal no appreciable difference of this nature. The observations were all made with the patient recumbent and with the instrument at the level of the heart. The conclusion arrived at is that the resistance of the arterial wall must be the factor underlying the effects noted,

and that this resistance is a direct result of the increased blood-pressure. The legs are in everyday life subjected to a greater hydrostatic pressure than the arms, from the higher column of blood they support, and this is assumed to explain the earlier degeneration of the vessels there. In the subsequent discussion there was evinced a decided disposition to criticise both Dr. Williamson's conclusions and his figures.

PROFESSOR BOAS, of Berlin, has adopted a new method of Treatment for Hæmorrhoids, which is directly opposed in principle to the orthodox ideas on the subject. In cases of prolapsed hæmorrhoids the first step in the treatment, according to classic methods, is to reduce and replace them within the anus. The professor considers this far from rational, and is of opinion that it favours ulceration and hæmorrhage, and leads to the development ultimately of hæmorrhoidal nodules. On the other hand, examination of the anal region will frequently reveal small hæmorrhoidal pockets, which, according to the author, are the remnants of old hæmorrhoids that have become obliterated naturally. Acting upon these ideas, Professor Boas has conceived his new method of treatment, which he terms the extra-anal treatment of hæmorrhoids, and consists briefly in causing a continued prolapse of the hæmorrhoids by which their complete strangulation and obliteration is effected. A preliminary injection of glycerine or sodium chloride solution is made, and the patient is then requested to make sustained bearing down efforts so as to bring the internal hæmorrhoids outside the anal orifice. If necessary the compression cups of Bier may be applied, and prolapse of the hæmorrhoids effected in this way. For the success of the treatment the hæmorrhoids must, of course, remain prolapsed. They then swell considerably and become filled with blood. At the same time the surrounding anal tissue becomes œdematous, and effectually keeps them outside, and also gradually isolates them from the general circulation. After the third or fourth day the hæmorrhoids begin to shrink, and may become slightly ulcerated on the surface, and in the course of the second week they are reduced to small nodules which ultimately disappear. So far the author has only treated eight patients, but has obtained a satisfactory result each time. He states further that the pain and discomfort to the patient during the first few days is not serious, and seldom sufficient even to require morphia or codeine suppositories.

AN interesting report has been made to the Medical Society of Vienna by D. A. von Kutschera, the sanitary inspector-general of Styria, on the Treatment of Cretinism by Thyroid Extract. Since 1907 this treatment has been instituted by the State at the instigation of Professor von Wagner. Thirty-seven stations have been formed at which the cretins are examined. The patients remain at home and are given gratuitously doses of 0.3 gm. daily. The treatment is started as early as possible in life. Idiots and deaf mutes are excluded. Those under three years of age and those who do not tolerate the treatment well are given a half or third of this

amount, or even only one dose a week. Altogether 1,011 patients have been treated in this way. Of these 403 have not continued the treatment or have not followed it seriously. According to the author the increase in growth of the child is a good indication, as the other symptoms always improve proportionately. This has been carefully watched in 440 cretins. Of these, in 45 cases, or 10.2 per cent., the growth was inferior to that of a normal individual, and there was little improvement from the treatment. Eighteen patients (4.1 per cent.) showed a normal growth; and in 377 cases (85.7 per cent.) the growth was above that of a healthy child. The most rapid improvement occurred in children between the ages of one and six. As stated, all the other symptoms improved at the same time—the swelling of the tongue, salivation, eczema, sweats, goitre, and the cretin expression, the walk, speech, and intelligence improved, the fontanelles closed, the teeth appeared, the genital organs developed normally, and the general nutrition and temperament benefited.

AT the same meeting of the Medical Society of Vienna Dr. Mautner gave an account of an interesting case of Hæmophilia, in which a severe attack of hæmorrhage, occasioned by the extraction of a tooth, was eventually stopped by the subcutaneous injection of horse-serum. The patient was a child aged four and a half, and had bled for three days. He became so anæmic that a blood count showed only 1,500,000 corpuscles per cubic millimetre. The hæmorrhage did not yield to the application of ordinary astringents. Twenty cubic centimetres of horse serum were injected subcutaneously, and caused an immediate cessation of the bleeding for several hours. A second injection arrested the hæmorrhage completely, and the pulse, which had become very rapid, slowed down. The child developed a polymorphous erythema, and had a slight rise of temperature in consequence of the injections.

DRS. AUGUSTE LUMIERE and GELIBERT, of Lyons, advocate the Treatment of Acute Gout in the joints by puncture and aspiration of the fluid. They based their treatment on the idea that the gouty affection of a joint was due to the excess of uric acid in the system being localised and concentrated in the joint tissues. This, however, they are unable to confirm, as they have never been able to detect on analysis the smallest trace of uric acid in the fluid drawn off from a gouty joint. Nevertheless, they are so convinced of the therapeutic effects of aspiration that they have continued the treatment, and do not hesitate to appraise its value. The immediate results of aspiration are, a rapid cessation of the pain, sudden fall of the temperature, and a definite termination of the attack. The pain is relieved immediately, and the patient can move the joint without any inconvenience, and considers himself cured. The authors claim, moreover, that after aspiration the attacks become much less frequent, and the treatment prevents the formation of deposits in the joints. On account of the rapidity with which a gouty effusion may become absorbed, they recommend puncture as soon as the presence of fluid in the joint can be definitely diagnosed. It appears that the method has only been

applied to cases of gout in the knee joint, and the external margin of the patella is recommended for the site of the puncture. Needless to say, the operation must be carried out under the most aseptic conditions. The fluid aspirated resembles that of an ordinary traumatic synovitis, and contains 0.66 to 13 grammes of urea per litre, but not a trace of uric acid or urate. It is highly toxic. Intravenous injections into rabbits show a toxicity of 10 to 12 c.c. per kilogramme. The authors are of opinion that the toxicity is due to the contained albuminoid substances, and they find that the pyretogenic property is not destroyed by heat.

A NEW compound of mercury—the Oleo-brassidate—is described by Raoul Dupuy in *La Revue Thérapeutique Médico-Chirurgicale*. The salt resembles clear yellow jelly. While feebly soluble in hot water, in tepid water to which soap has been added it is completely soluble. It consists of the oleate and brassidate of mercury, representing about 30 per cent. of the metal. Its great advantage over other mercurial ointments lies in the ease with which it can be spread; its independence of any excipient; its rapid absorption by the skin; and its extreme cleanliness in use. As a substitute for the ordinary blue ointment this substance is particularly recommended. It can be used both as a germicide for pediculosis pubis and as an inunction for syphilis. It has been extensively used at the Saint Lazare Hospital with very satisfactory results.

IN the *Journal des Sciences Médicales de Lille*, Piet argues in favour of Immediate Amputation for Extensive Crushing of Limbs. Some authorities consider this a blind and dangerous proceeding. Piet, however, declares that amputation is absolutely necessary in certain cases in which the hæmorrhage is extensive and uncontrollable, and points out that an operation lasting barely twenty minutes is not likely to be more dangerous than the prolonged and complicated measures, taking in some cases an hour, which are necessary to disinfect a wound thoroughly. Moreover, infection often follows the most elaborate measures of disinfection; whereas in this type of case suppuration is almost always prevented by immediate amputation. The dangers of insomnia, anorexia and rapid physical deterioration, and of septicæmia can only be avoided, according to Piet, by immediate operation. He maintains, therefore, that if at the outset amputation seems to be indicated, this should be done at once and not postponed until shock has disappeared.

MANY years ago Pfeiffer described a complication of Influenza, which he termed Glandular Fever. He considered it a special disease, almost a morbid entity. Nowadays it is no longer recognised as a separate disease, and it is, in fact, found also as a complication of other pyrexias. A mild form of this affection is described by Bureau. This occurs for the most part in children. The onset is rapid, the temperature quickly rising to between 102° and 105° F. At the same time all the symptoms of influenza are noticed—pains in the limbs, vomiting, and anorexia. Soon after is seen a swelling of the glands of the neck, with stiffness of the muscles and difficulty in deglutition. After 48 hours or so the fever

commonly subsides, but it may continue as long as ten days, and may show intermissions. Some enlargement of the liver and spleen, with hypogastric pain, are often present. The author attributes this pain to enlargement of the mesenteric glands. Albuminuria also may occur. Suppuration never follows the glandular inflammation. A second variety, more chronic in type, is also found, but it is rare, and often occurs unrecognised. Here the abdominal glands are most liable to be affected, while albuminuria and diarrhoea are common, and considerable wasting is often seen. The bacteriology of this disease is as yet obscure. Streptococci, staphylococci, pneumococcus and the bacillus of influenza are usually found in association; but much more work is needed, in this and other directions, to determine the nature of glandular fever.

TRILLAT and Legendre have carefully experimented with Formol with a view to discovering the efficacy of this drug in destroying flies. They have been able to show that it is by the ingestion of the drug that the flies are killed. If Formol be mixed with milk, the flies are attracted to the mixture, and die in large numbers. The fluid should be poured out on a large surface, and need be of no great depth. In such rooms as are infested with flies it is best to put a number of large flat vessels containing a mixture of 15 per cent. of commercial Formol, 20 per cent. of milk, and 65 per cent. of water. The dead bodies of the flies are subsequently found lying at some distance from the receptacles, and not, as might be imagined, in the mixture. In stables and dairy-houses the ground can be sprinkled with skim-milk containing 10 per cent. of Formol. Now that so many diseases have been shown, or strongly suspected, to be disseminated by flies, scientific measures for the destruction of these insects should be recorded, especially at the onset of summer.

JAVAL and Boyet showed some time ago that the different Body Fluids, blood-serum, ascitic fluid, pleural effusions, etc., when taken from the same patient at the same time, contain approximately identical quantities of urea, irrespective of the figure of the concentration of this substance. Hence they concluded that it is diffused throughout the organism, and helps to maintain an isotonic condition between the various serous surfaces. Some new experiments described by them confirm their former results, and even justify conclusions with respect to the total amount of nitrogen retained in the system, with the exception of nitrogen contained in albuminoid substances. In five cases they were able to show an almost identical content not only of urea, but of all nitrogen which was of non-albuminous origin, in serous fluids removed at the same time from the same subject. This uniformity of distribution, both of non-albuminous nitrogen and of urea greatly facilitates the discovery of any excess of nitrogen in the organism, since it allows of the choice of the liquid in which to study these two forms of nitrogen retention. In the absence of blood-serum, an equally accurate result can be arrived at from the study of any body fluid such as cerebro-spinal, pleural, or ascitic fluid.

HOSPITAL CLINICS.

A CLINICAL LECTURE ON A CASE OF ULCERATIVE COLITIS.

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THE somewhat rare and at present mysterious disease which we term provisionally ulcerative colitis has lately attracted a good deal of attention, so that this affords a convenient opportunity of considering carefully the details of a fatal case which has recently been in the Royal Free Hospital, and which alike in its clinical manifestations, its course, its morbid appearances, and in the age of the patient, presents an exceedingly typical picture of the condition.

Mrs. W., æt. 33, was taken ill at the beginning of November 1908. As seems to be usually the case in ulcerative colitis, the patient's previous health had been perfectly good; she had been quite free both from diarrhoea and from constipation, the bowels having always acted regularly, and she had never lived abroad. There had been no illness among other inmates of the house. The onset of the disease was rather sudden, with diarrhoea six to eight times a day, and hæmorrhage from the bowel, bright red blood being passed in considerable quantity with each motion. Under treatment at home the hæmorrhage ceased, but as the diarrhoea continued and the patient was getting weaker, she was admitted to the Royal Free Hospital on December 14. The subsequent clinical history may be briefly summarised as one of persistent diarrhoea, occasional slight intestinal hæmorrhage, increasing weakness and wasting, and finally death on March 13, 1909, from exhaustion, due apparently to starvation, the emaciation being of the most extreme character, more marked even than in the majority of cases of malignant disease, and rivalling that met with in the worst examples of infantile marasmus.

Now let us consider the *Symptoms* more in detail. The most persistent was the diarrhoea. Probably from the commencement of her illness the patient never passed a normal motion; occasionally the stools were semi-solid, but usually quite liquid; sometimes they contained a little mucus and rarely some undigested food, but they were not specially offensive. Usually the bowels acted from three to six times within the 24 hours; there was often a little pain just previously, but not at any other time. At first the taking of food seemed to excite an action, but after a few weeks this ceased to occur. Tenesmus was sometimes complained of, but was never severe or persistent.

After the patient's admission to hospital the motions frequently contained small quantities of bright red blood, especially when the diarrhoea was more troublesome, but there was never any large hæmorrhage. There was no vomiting or hiccup. The abdomen was flat, but in the central part, especially just above the umbilicus, visible peristalsis was sometimes present; there was no tenderness, but some gurgling could be felt on pressure. The appetite was remarkably good throughout the

greater part of the illness, and the food taken was probably satisfactorily digested. During the first few weeks the temperature was very irregular, rising at times to 102°. After the patient's admission to hospital its range was much lower; for several weeks it did not rise above 100°, and was at times quite normal for several consecutive days. Towards the end of life, however, it frequently rose to between 100° and 101°.

The blood was examined once (December 16), but merely showed the characters of an ordinary secondary anæmia: red blood corpuscles, 4,250,000; white, 12,600; an excess of small lymphocytes; no abnormal forms seen; hæmoglobin, 60 per cent.; colour index, .7.

At the *Autopsy* most extensive ulceration was found of the whole of the large intestine from the cæcum to within four inches of the anus, the ulcerated surface, except in the rectum, being much more extensive than the remaining mucous membrane. The ulcers were very irregular in shape, with slightly raised and much undermined edges, some of them communicating under ridges of intact mucous membrane. The peritoneal surface of the bowel, except for slight congestion, was normal, and there was no thickening of the wall of the gut. About a foot above the ileo-cæcal valve there was slight ulceration of the small intestine for two inches of its length, the ulcers being small and irregular in shape. The other organs were normal, except that the whole appearance was one of extreme inanition. Cultures from the ulcers grew bac. pyocyaneus and bac. coli; no amœbæ.

The *Diagnosis* in this case was not difficult, apart from the hesitancy one must always feel in giving a definite opinion in regard to a comparatively rare form of intestinal ulceration; but it is easy to realise that in less typical instances of the disease mistakes might easily be made. The essential thing is, of course, carefully to consider and exclude other possible causes of intestinal ulceration.

The considerable degree of pyrexia at the commencement of the illness raised the question of typhoid fever, but, apart from the great improbability of severe hæmorrhage occurring so early in typhoid, the other symptoms of that disease—the enlarged spleen, the abdominal distension, the rash, and the bronchitis—were all absent. That the distinction between the two diseases may, however, be very difficult is shown by the fact that last autumn a man died in the hospital from what was supposed to be a somewhat atypical attack of typhoid fever, ending in perforation, but at the autopsy the lesions were found to be those of ulcerative colitis, and were almost confined to the large bowel; it was in this that the perforation had occurred.

Tuberculous ulceration has to be thought of, but although common enough from secondary infection in cases of chronic pulmonary tuberculosis, it is

very rarely met with in adult life as a primary lesion. Such primary ulceration occurs for the most part in children, at an age when true ulcerative colitis is very seldom seen. It may be noted also that severe hæmorrhage is a rare symptom in tuberculous ulceration of the bowel. As a further means of excluding the possibility of tubercle in this case, two injections of old tuberculin (.001 and .002 c.c. respectively) were given after the patient had been free from fever for some days; no rise of temperature followed.

The possibility of the symptoms being due to a new growth must always be considered, for in some recorded cases mistakes have arisen between the two conditions. A growth tends to produce obstruction rather than diarrhoea, but, as is well known, the irritation which it causes often gives rise to what the patient calls diarrhoea: observation of the stools soon shows that in reality very little actual faecal matter is being passed. A rectal examination should never be omitted, although, of course, a neoplasm may be beyond the reach of the finger, but ulcers in colitis may sometimes actually be felt. In the present case the results of an ordinary rectal examination were negative, but valuable information was obtained by the sigmoidoscope, which showed that the upper part of the rectum and the lower end of the sigmoid flexure were studded with small ulcers. A swab of pus and blood taken directly from these ulcers was examined for tubercle bacilli, but none were found. It is well to bear in mind that the passage of the sigmoidoscope in these cases is not altogether free from risk, as the bowel wall may be greatly thinned and very rotten in places. At least one case has been recorded in which perforation has thus been brought about.

A duodenal ulcer is not likely to give rise to difficulty; it does not produce diarrhoea, and any blood passed will almost certainly be greatly altered in the course of its passage through the whole length of the bowel.

I have left to the last the diagnosis from dysentery, because at present it is doubtful whether we are in a position to draw any absolute distinction between the two conditions. Sir Patrick Manson has said very truly that "dysentery is not a disease, but merely a word standing for a group of symptoms indicative of an inflamed condition of the colon." The pathological appearances of dysentery and of ulcerative colitis seem to be identical. It may be noted that our patient, like most of those suffering from ulcerative colitis, and unlike those with ordinary dysentery, always had faecal matter in the stools, and did not suffer much from tenesmus; but, after all, differences such as these are by no means essential, any more than is the fact that the patient had not been abroad, for dysentery is not confined to the tropics. It may be mentioned incidentally that we are equally in the dark as to the relations which the so-called "asylum dysentery" bears both to the tropical form and to ulcerative colitis. It may be that cases which we now call ulcerative colitis, and which seem to be entirely sporadic, bear the same relation to epidemic dysentery as do cases of simple posterior basal meningitis to epidemic cerebro-spinal fever. Possibly the final word on the question will

be spoken by the bacteriologists, but at present they can scarcely be said to have uttered the first one.

In regard to *Prognosis*, there is no doubt that this is exceedingly grave, for of cases sufficiently severe to be definitely diagnosed probably at least 50 per cent. die, whilst of those which are lost sight of, it seems likely that a large proportion are not really cured, or at any rate relapse. The very extensive lesions commonly found at autopsies fully account for the extremely grave character of the disease.

Treatment.—This is most unsatisfactory, as may be inferred from what has already been said. It is obvious that a patient suffering from this disease should be kept at rest, warm, and should have hot applications to the abdomen in the event of there being any abdominal pain or discomfort. Some doubt may well exist as to the best method of feeding. In view of the extensive ulceration of the colon, it may be argued that the diet should be entirely fluid and unirritating, very much the same, in fact, as though the patient were suffering from typhoid fever. On the other hand, it often happens, as in the present case, that the tongue is clean, the appetite good, and digestion apparently performed quite normally. Under such circumstances, and assuming there is no considerable pyrexia, I believe it is better to give a fairly varied diet, including even some meat. Our present patient had such a mixed diet, and it never appeared in the slightest degree to increase either the diarrhoea or the hæmorrhage. She was also given soured milk, about two pints a day, for several weeks; but it did not produce any appreciable effect, and she greatly disliked it. It is strange that these patients should be able to take and apparently to digest large quantities of food, and yet, even in the absence of fever, should steadily lose weight, especially as there is little or no affection of the small bowel, in which presumably the greater part of digestion and absorption take place. Possibly, owing to some reflex influence, the food is unduly hurried along the small intestine.

Various drugs were tried by the mouth, including bismuth, tannigen, and paraffin, but the only one which was in any way useful was opium. For a long time it was given in the form of Dover's powder, ten grains every four hours. It never stopped the diarrhoea, but directly it was discontinued the motions became more numerous and more liquid. A remarkable feature was the way in which it was tolerated; a grain of opium every four hours never led to any contraction of the pupils or to drowsiness, and later on 15 minims of tinct. opii were given every two hours without such consequences resulting. Opium was also given per rectum, up to two grains at a time, but seemed to act better by the mouth. Possibly much of it escaped absorption, in the same way that the food apparently did, and this may explain the absence of its usual effects.

Locally, treatment was attempted by washing out the lower bowel with weak solutions of nitrate of silver ($\frac{1}{2}$ grain to the ounce), or a 2 per cent. solution of argyrol, followed in either case by a wash-out with a solution of boric acid (10 grains to the ounce) and common salt (3 grains to the ounce) in equal quantities. If any improvement at all fol-

lowed, it was too slight to counter-balance the patient's great aversion to the process and the exhaustion to which it gave rise. The extensive lesions found at the autopsy throughout the whole length of the colon, equally in the upper as in the lower end, indicate that but little benefit is to be expected from treatment on these lines.

A few cases have been recorded in which great improvement has followed injections of coli vaccine, and accordingly on February 4 the patient was given an injection of 30 million bac. coli and bac. pyocyaneus prepared from her stools, followed four days later by a second injection of 70 million bacilli. Unfortunately the results were apparently harmful rather than otherwise, as the temperature, which for some weeks before had not risen above 100°, afterwards rose for many days to a distinctly higher level, and at the same time the diarrhoea became rather worse.

Lastly, the question of operative interference was considered and suggested, but as both the patient and her relations were greatly opposed to it, the

matter was not pressed. The subject is too large for discussion here, especially as the different aspects of the question will be found fully set forth in the Proceedings of the Royal Society of Medicine (Medical Section) for February and March 1909. Certainly an operation is not lightly to be undertaken, as the chances of success are very doubtful and the immediate risks in an advanced case by no means slight. Appendicostomy, followed by systematic washing out of the entire length of the large intestine, has several supporters. On theoretical grounds a right-sided colostomy presents greater chances of success, by diverting all faecal matter from the ulcerated surface, but experience shows that any attempt to close the artificial anus is frequently followed by a return of the old symptoms.

In conclusion it must be acknowledged that at present our methods of treating the disease are altogether unsatisfactory. Probably not until we know more about its real nature and cause can we hope to attain better results.

SPECIAL ARTICLE.

HEPATO-INTESTINAL TOXAEMIA.—I.

WHETHER or not auto-intoxication by the absorption of poisonous products from the alimentary canal really plays so important a part in the production of symptoms as some observers would have us believe, is still a matter of conjecture and controversy. Notwithstanding bacteriological investigation of faeces, chemical analysis of urine for such substances as the conjugated sulphates, indican, putrescine, and so forth, it is still quite an open question whether there is any such thing as an intestinal auto-intoxication in the generally accepted sense at all. There are numerous clinical symptoms that are described as those of hepato-intestinal-toxaemia by those who are staunch upholders of the intestinal auto-intoxication theory. There is little or no doubt about the symptoms; the moot point is whether they are due to the cause to which they are attributed.

Dr. Edward Quintard, Professor of Medicine in the New York Post-Graduate Medical School and Hospital, has written upon the subject at some length, and mainly from the clinical and the therapeutic points of view. He states that he has seen cases at all ages and in both sexes, but that the large proportion are between 30 and 50 years of age. Men seem to suffer more frequently than women. Cases are both acute and chronic, but the majority belong to the latter category, lasting many weeks or months, and not infrequently extending into years.

Their general appearance may be very fair, their symptoms being mainly subjective, at first at any rate, and in those who suffer from the complaint in slighter degree. There is often a mild grade of anaemia, or a sallowness without actual anaemia. The conjunctivæ are not jaundiced, but they are decidedly not white; perhaps the term icteroidal might describe them. The tongue is coated yellowish-white or yellowish-grey; this coating may be thin or thick, extending over the entire tongue

or limited to the back of it. There is often some dryness of the mouth also. The patients may be fairly well nourished, but in the chronic cases, where the supposed toxæmia has seriously affected the general metabolism and nervous system, marked emaciation may exist. They not infrequently present a rather listless, depressed, or melancholic attitude, although this is not constant. On questioning them, it will be found that, except in very severe or unusual cases, symptoms begin in a characteristic way and run a definite course until ultimately the nervous system suffers, and to the symptoms caused by the chronic poison must be added those of neurasthenia.

The patients state that their condition is one of constant ill-health, with certain periods when they feel particularly bad; or else they feel in good health for a few weeks or possibly months, and then suffer attacks which render them out of sorts for a longer or shorter period. In the intermittent cases the onset of the attack may be preceded by a 24 hours' period during which the patient feels more than ordinarily buoyant and energetic, with an increase in appetite and a desire to be up and doing—a condition of particular *bien être*. The following symptoms then manifest themselves, at times one and again another being in primary evidence.

An indescribable discomfort in the right upper abdominal quadrant. It is not a pain, nor is there any particular spot of sensitiveness to pressure in this region; yet the patients frequently complain that they feel as if they wished to "get away from something" in this neighbourhood, and at times they will exert deep manual pressure over this area in order to see whether by so doing this peculiar discomfort can be relieved. Whether or not a mild duodenitis is at the root of this cannot be definitely said, but at any rate the symptom is a fairly constant one, and it may precede all other symptoms

by 24 hours or more. Like the other symptoms, it is not invariably present.

Circulatory and respiratory disturbances may be absent, slight, or severe. Dizzy sensations, or feelings of "light-headedness," are not uncommon. This dizziness may be limited to times when the patient makes a sudden movement, such as rising from bed or from a sitting posture, or when he suddenly turns his head. At times, however, dizziness and vertigo may be so severe as to prevent the patient from raising his head at all, or they may temporarily interfere with his gait. He may bump into doors and walls whilst walking, and this may greatly alarm both his friends and himself.

Palpitation may come on at any time, especially after meals or on exertion. The attacks may be very severe and alarming, being associated sometimes with sudden dyspnoea and feeling of impending dissolution. So sudden and unexpected may these attacks sometimes be that the medical practitioner himself, has he not seen such cases before, may believe that some obscure cardiac lesion exists, until he has convinced himself of the contrary by most thorough and repeated examinations.

In these attacks of dyspnoea the patient feels that he cannot take a deep breath; his heart may palpitate; arrhythmia may occur; the patient may wake up with such an attack, or he may be walking in the street when seized. Angina pectoris may be simulated. The patient's first sensation may be that of a warm wave or flush passing suddenly over his entire body. Immediately upon this he will be seized with dyspnoea, palpitation, oppression in the chest, and feeling of imminent death. In some, dyspnoeic attacks may occur but once, or again they may recur more or less frequently for a time and last for from a few minutes to an hour or longer. At times breathlessness on exertion is another marked symptom of both the acute and chronic form of the condition. Oddly enough, in cases in which it is manifest it becomes especially marked after a dose of a mercurial, particularly after calomel. It would seem that in such cases the sudden unloading of the poison from the liver and its re-absorption from the intestinal tract into the circulation increase the toxæmia for the time being, and so affect the neuromuscular system that any effort or exertion disturbs the respiratory and circulatory equilibrium. Such attacks are more apt to occur in neurasthenic patients.

These are varied, and mild or severe according to the degree of toxæmia and the susceptibility of the nervous organism of the patient. Headache of the migraine type occurs, but less commonly than do feelings of congestion, fulness or lightness in the head, or a dull heavy ache in the occipital region. Apart from the temporary increased sense of well-being described above as a prodromal sign of an attack, the patients are generally despondent and depressed. When such a chronic toxæmia is superimposed upon a system that is already neurasthenic or exhausted there may be great difficulty in persuading either the patient or his friends to take a hopeful view of the case. The marked depression and despondency cause them to believe that there is something the matter with their minds, and they either

dread that they will become insane or believe that they have actually become so.

For months at a time these patients may feel giddy or uncertain when going downstairs. They feel as if they might pitch forward and fall. They may also complain of other subjective sensations, such for instance as a feeling as if the pavement were suddenly rising up towards them as they walk. Doubtless the toxæmia is causing errors in the cerebral circulation in these cases; sometimes it is really difficult to decide whether there may not be a more serious labyrinthine or other intracranial lesion. Insomnia and bad dreams, especially the sensation of sudden falling just as sleep approaches, are common symptoms also.

So far as the stomach itself is concerned, in the vast majority of cases there are no subjective or objective signs, unless perhaps impairment of appetite. Neither the physical nor the functional signs reveal anything abnormal in the stomach as a rule. It is different, however, with the liver and with the intestinal tract. One looks for and usually finds evidence of constipation, various fermentations, and intestinal putrefaction; the stools are light and almost clay-like, though there is no jaundice and the urine contains no bile pigments; fat is poorly absorbed; and there is decided discomfort in the right upper quadrant of the abdomen.

We have, then, in the intermittent type of the disease periods of seemingly perfect health interrupted by attacks that usually have a characteristic onset, and last for from several days to as many weeks. Occasionally, however, the condition is one which, instead of ending at this time, runs a subacute course for a month or so; or at any time the intermittent may change to the remittent type.

The attacks in the intermittent type begin suddenly. The patient may have a period of hyper-euphoria during which for a few hours or a whole day he feels particularly buoyant and energetic; then he notices that his stools are much lighter in colour than they were, that he has a discomfort in the right upper quadrant of the abdomen; that his tongue becomes coated, his face sallow, and his conjunctivæ icteroidal, the last three especially in the morning. At the outset he may suffer from polyuria, and the urine may be very light in colour or be voided in much less quantity than usual. He feels decidedly depressed and lacking in physical and mental energy; he may or may not feel drowsy; he may or may not have nausea; he very rarely has vomiting; his feet and hands become cold, he has chilly sensations, and it may be impossible for him to become properly warm all over; he has sensations of dizziness or of vertigo. He may have several of these symptoms or all of them. There may be numb sensations in different parts of the body, especially in the legs and forearms. At times there is difficulty in enunciating words—not a true aphasia, but a condition in which the patient feels as though his tongue were swollen and thick, so that he pronounces words imperfectly, especially if he speaks in a hurry. During such times, also, his memory is not keen; he cannot concentrate his thoughts, and he may find it very difficult to attend to his affairs. (To be concluded.)

MEDICINE.

WATER DRINKING IN THE TREATMENT OF CHRONIC CONSTIPATION.

THERE can be little doubt that the two most important points in the prevention or cure of chronic constipation are, first, the persistent encouragement and training of the diurnal habit of emptying the bowel at a regular hour; and, secondly, the avoidance of interference with this diurnal habit by the thoughtless prescription of laxatives or purgatives, which temporarily relieve a constipation but which tend to encourage its recurrence.

A third very important point, however, is the use of water-drinking—ininitely preferable to purgative or cathartic drugs. This is no new form of treatment—it is as old as is Spa treatment of any kind; nevertheless, there are features and details in it that receive too little attention as a rule.

Water is healthful, but persons often drink too much, or take it at too high or too low a temperature. In the treatment of constipation indiscriminate water-drinking should be discountenanced. Consequently, when this therapeutic agent is prescribed it should be ordered with details as to time, quantity, temperature, relation to food, and so on, with a definite object in view according to the case. Except in special instances, water should never be ingested at temperatures below 50° F. or above 130° F., positive harm being sometimes done to the gastro-intestinal mechanism when either of these extremes is passed. It is rarely necessary to drink more than from ten to fifteen glasses of water during the day, and usually from five to six are ample.

The effect upon the stomach and intestine is much better when a small quantity, such as half a tumblerful, is taken at frequent intervals—say every hour or every two hours—than when the same amount of water is consumed at two or three draughts. It has been definitely proved that the stomach absorbs hardly any water, the small intestine little, and the colon a great deal. Owing to the non-absorption of water by the stomach, if a large quantity is swallowed it interferes with digestion, distends the stomach, and by its weight causes sagging of this viscus, favouring gastroptosis and enteroptosis, which in their turn aggravate the constipated state. Ordinarily, constipated subjects should drink from one glass to a glass and a half of water on rising, and lesser amounts at short intervals during the day.

The habit of drinking several glasses of water, particularly of iced water, at meal-time is detrimental to health, because the water washes the food down before it has been properly masticated, dilutes the gastric contents unduly, upsets the local circulation, and generally interferes with the digestive process. Indigestion, gastrectasis, constipation, anæmia, and other ailments are liable to ensue. On the other hand, drinking cool or cold water in moderation at meal-times has a healthy influence on the alimentary canal. Drinking of cold water is contra-indicated in colic, in the treatment of very old and feeble persons, in cases of gastric ulcer, arteriosclerosis, persistent anæmia,

diseases of the kidney, and in persons who are from any cause either physically fatigued or hot and perspiring.

Cool water produces a general tonic effect and stimulates the intestinal musculature and mucous glands to greater activity. Warm water has an opposite effect. It soothes and quiets the alimentary tract, relieves irritation and pain, and arrests or diminishes enterospasm.

The beneficent effect of water in constipated subjects is due as much, if not more, to its thermic as to its mechanical and solvent action. Many persons suffering from severe obstipation have been cured without drugs by judicious water-drinking, together with attention to diet and with efforts on the patient's part to secure a daily evacuation after the morning meal.

When chronic biliousness and signs of auto-intoxication are present, a glass and a half of cold water taken in the morning on an empty stomach stimulates the stomach, liver, and gastro-intestinal tract, and in this way helps to regulate the stools and eliminate toxins from the bowel.

Drinking of warm and moderately hot water should be discouraged in persons afflicted with chronic habitual atonic costiveness, for the reason that a lethargic state and infrequent evacuations are encouraged by its sedative action. Water at about body temperature—96° F. to 100° F.—acts similarly, but to a less marked degree. Very hot water—125° F. to 140° F.—stimulates peristalsis, but it prejudices the gastric mucosa locally; it should not be employed for long except when constipation is complicated by hypopepsia, gastro-succorrhœa, gastralgia, or enterospasm.

From what has been said it may be inferred that the temperature of the water to be taken by constipated patients should be decided with considerable care if the best effects of the treatment in the individual case are to be obtained. It may be stated that drinking of cold water is advisable in chronic atonic constipation, for the reason that it stimulates the local and general circulation, improves assimilation and metabolism, favours elimination of toxins of all kinds through its effect upon the skin, liver, and kidneys, increases peristaltic action, causes a more abundant secretion of mucus for lubricating the bowel, and softens the fæces, so that the stools become normal in quantity and in frequency.

Cold drinks produce so much increase in intestinal contraction that pain sometimes results, and occasionally actual colic; on account of this tendency drinking of cold water should be prohibited in persons suffering from enterospasm, colic, or obstructive symptoms.

In spastic constipation the fæcal current is partially or completely blocked because of an occlusion due to simultaneous contraction of both the longitudinal and circular muscular fibres. Such enterospasms may occur at short or long intervals, and last for several minutes, hours, or days. Hot water—at 110° F. to 120° F.—taken by the mouth has

almost a specific action in relieving and preventing constipation of this type. The hot-water drinking may be reinforced by hot abdominal fomentations, which act in a similar manner. In addition to its sedative action, hot water taken internally is as serviceable as cold water in liquefying the fæces, softening any scybala that may be present, and thus helping to overcome habitual constipation. Several

cases have been recorded in which mechanical obstruction due to inspissation and impaction of fæces has been overcome by copious drinking of hot water. The good results obtained in this class of sufferers have been attributed to both the soothing effect of the hot water reducing intestinal irritability and muscular spasms, and its mechanical action in dislodging the cause of the obstruction.

CONDITIONS SIMULATING ENLARGEMENT OF THE LIVER.—II.

ENLARGEMENTS of the liver may be mistaken for, and require to be distinguished from—Firmly contracted recti abdominales muscles; kidney tumours; supra-renal tumours; pancreatic tumours; omental tumours; carcinoma of the stomach; carcinoma of the colon; fæcal accumulation in the colon; distension of the gall-bladder.

RENAL AND HEPATIC ENLARGEMENT.

It is not likely that a kidney tumour will be mistaken for a hepatic enlargement unless it is very large or unless it becomes adherent to the under surface of the liver; and a liver tumour is not often mistaken for a renal tumour unless the liver is dislocated or deformed and constricted by tight-lacing. A kidney tumour, if sufficiently large to be mistaken for an enlargement of the liver, would cause more lateral bulging of the abdominal wall unless the tumour of the liver happened to be a large hydatid cyst, an abscess, or a malignant growth arising from the outer and lower part of its right lobe. A tumour with a well-defined sharp edge is not the kidney. A renal tumour is rounded.

If an enlarged right kidney is not adherent to the under surface of the liver bimanual palpation may possibly show that the liver can be felt to move downwards over the renal tumour on deep inspiration, and independently of it, seeing that the movement of the liver with respiration is nearly always far greater than is that of the kidney. If the kidney is adherent to the under surface of the liver, both would move together at the same rate and to the same extent; but it might be possible to feel the relatively sharp, well-defined edge of the liver lying over the anterior surface of the upper part of the renal tumour, especially if palpation of the liver edge is begun in the epigastrium, and the edge traced thence towards the right.

The loin is more filled out and rendered more resistant behind in the case of a renal tumour than in that of a hepatic enlargement. If a marked sensation of nausea is produced as a result of manipulating the tumour it would point to the kidney as the organ involved. Another point which may be determined by bimanual palpation is that the hands can usually be placed between the costal margin and the upper part of a renal tumour. In cases of hepatic enlargement, on the other hand, the liver comes down close under the abdominal parietes, and the hand cannot be placed between it and the costal margin except in rare cases of extreme dislocation of the organ. If on percussion the normal resonant note obtained in the loin over the colon is replaced by dulness it would point to

the kidney as the organ involved unless there were ascites, of which the rest of the abdomen would probably afford distinctive physical signs.

There is usually a resonant note over the front of a renal tumour on account of the colon being displaced forward and lying in front of it; the anterior surface of a liver enlargement on the other hand is generally dull, at any rate to light percussion. Occasionally, but very rarely, a coil of distended intestine may get between the edge of the liver and the abdominal parietes, causing even the lightest percussion to give a resonant note. On the other hand if the renal tumour is very large, and the colon is pushed forward and to the inner side, there may be dulness all over the front of the tumour; even when this is so, however, a band of resonance can usually be made out between the dulness of the liver, and that of the renal tumour.

Hæmaturia, pyuria, or albuminuria would be in favour of the tumour being renal, whereas jaundice or ascites would point to its being hepatic. It should be remembered, however, that these symptoms are not absolutely diagnostic of either condition, for jaundice may result from compression of the bile ducts by an enlarged or movable kidney, and hæmaturia may be due to renal infarction in a case of infective endocarditis with big nutmegged liver.

Malignant disease of the right supra-renal gland is decidedly rare, but it may give rise to a large tumour which is difficult to diagnose from an enlargement of the liver. The physical signs of a supra-renal tumour are practically the same as those of a renal tumour, except that the colon is usually pushed downwards instead of forwards. If the mass should become adherent to the liver it would move with it, and at the same rate as it, during respiration. In children the fact that an abnormal development of hair, of the genitals, and of the adipose tissues is sometimes noticed in association with supra-renal tumours may be helpful in arriving at the diagnosis.

A Carcinoma of the colon or stomach, if adherent to the liver, is apt to simulate a tumour of the latter. In the case of carcinoma of the stomach, which would most likely be of the pylorus, there would in all probability be gastric dilatation with the characteristic signs and symptoms—local abdominal distension, visible peristaltic waves, succussion splash, tympanitic percussion note, vomiting of large quantities of brown, frothy, thick, grumous fluid, hæmatemesis, and so forth. In the case of carcinoma of the colon, there might be signs of chronic intestinal obstruction—constipation, vomiting, tympanitic distension of the intestines, and possibly the passage of blood per rectum.

(To be concluded.)

SURGERY.

ENLARGEMENT OF THE PROSTATE—II.

THE symptoms to which this condition gives rise have been described in a previous article, and in conjunction with the age of the patient they form a syndrome which is in itself highly suggestive; but a positive diagnosis cannot, and should not, be made without further examination. The first thing that must be done is to pass a catheter. This will not only enable one to exclude the presence of a stricture, the symptoms of which are somewhat similar, but it will also give other valuable information, as will be shown shortly.

For this purpose a medium-sized catheter should be chosen. The writer prefers a No. 8 English gum-elastic coude as a preliminary instrument in all cases in which it is desired to examine the state of the interior of the urethra. Even for an ordinary stricture it has advantages over the olivary-headed catheter, since the orifice of the stricture is rarely in the centre of the urethra, but generally is drawn to one side of the tube. With the point of a coude catheter the various points of the circumference can be gently explored in turn by turning the catheter gradually round the complete circle. If the prostate is enlarged, it is especially advantageous, since the bend in the point will enable it to pass easily over the projection on the floor of the prostatic urethra.

Whichever type of instrument be chosen, it is bad practice to begin with one of small size, since the point is liable to catch in the crypts or pouches of the urethral mucous membrane, and if any undue force is used a false passage will be made, and this is a very troublesome complication. This is especially true of the smaller sizes of metal catheter. Mention must be made of two other precautions which should be taken in passing a catheter on an old man suspected of enlargement of the prostate. One is that if an instrument is being passed for the first time, it should be done under such circumstances that the patient can be kept under observation for at least twelve hours afterwards. The reason of this is that some patients are peculiarly susceptible to urethral instrumentation, and so-called "catheter fever," characterised by one or more rigors and pyrexia, may ensue after the simple passage of a perfectly aseptic instrument. It is better, therefore, to perform the examination in the patient's home than in a consulting-room. The other precaution to which reference is made is that no force should be used in the passage of the catheter. It must be remembered that an enlarged prostate is usually in a congested condition, and will bleed readily on slight provocation. It has already been mentioned that the contraction of the muscle fibres of the bladder on the organ at the end of micturition is often of itself sufficient to produce this result. And any damage to the organ sufficient to make it bleed may set up a temporary inflammation, and thus lead to acute retention of urine.

The passage of a catheter will therefore enable one to exclude the presence of a stricture and to

estimate more or less exactly the condition of the prostate. But, further, if the catheter is passed immediately after the patient has emptied his bladder as completely as he can, the amount of residual urine left behind is known. It has been explained that as the prostate enlarges a cavity is formed behind it at the base of the bladder, and the urine contained in it cannot be expelled in the ordinary way. The amount of residual urine removed by the catheter varies from an ounce or two up to half a pint or more; and in the latter case percussion will reveal a dull note stretching up some distance above the symphysis pubis even immediately after micturition.

The urine so withdrawn should be carefully examined and tested for abnormal constituents, particularly for the presence of pus, which would indicate that the kidneys are diseased, and that pyelonephritis is present. But it is even more important to make a quantitative examination for deficiency of abnormal constituents, particularly urea. Often the kidneys, without active disease, are not working as they should do. This is caused by the continual exertion of secreting against pressure, and is shown by a subnormal percentage of urea in the urine.

A digital examination of the rectum should never be omitted. The information derived varies greatly, and a large experience of these cases is necessary before one is able to say definitely that the prostate is enlarged. As often as not, for instance, there is no apparent enlargement per rectum when the symptoms are quite diagnostic. This is due to enlargement in an anterior direction, or the so-called "enlargement of the middle lobe." Or again, a prostate of normal size may cause symptoms because it occupies an abnormal position at the neck of the bladder. In general enlargement, however, the posterior part will press backwards on the anterior rectal wall, causing a definite bulging.

Often the nature of the enlargement may also be estimated. Thus diffuse hypertrophy causes a smooth bilateral projection. An adenoma is also smooth, but causes a one-sided enlargement. Rarely the enlargement is due to calculi in the gland, and in these the surface is nodular and often tender from chronic prostatitis. Lastly, the prostate may feel nodular and *hard* and densely adherent to the anterior rectal wall, so that the mucous membrane cannot be made to move over it. Here the enlargement is certainly carcinomatous. This is a point of great value in deciding on the line of treatment; and it is of the highest importance to be able to recognise an enlarged prostate as malignant. In simple enlargement suprapubic prostatectomy is highly satisfactory, as will be shown in a subsequent article, but if the prostate is malignant a sufficiently radical operation cannot be done by this route. The perineal route affords the best approach in malignant cases, but even then a good result can only be looked for in very early cases.

MENTAL DISEASES.

A FEW PRACTICAL POINTS IN CERTIFICATION.

THE care of the insane being a matter of considerable expense and generally of long duration, if any member of a family of moderate or small means becomes insane, that individual frequently falls under the definition of a Pauper which is given in the Lunacy Act.

Now, every person whose work or inclination brings him into contact with all sorts and conditions of mankind, is bound to realise the hardship of dressing in pauper costume and of placing in the same wards with the lowest and pauper classes those who are, and who always have been, respectable in life, and who are of fair or good education. These latter, no matter what their occupation, do not habitually mix with the lower class, and it is only misfortune which can force them to do so. Owing, however, to lack of space and of other conditions necessary for proper classification in public asylums, all classes of patients in them have to be more or less mixed together, since each patient has one circumstance in common with the rest—namely, lack of means to pay more than the cost of maintenance. The mental pain experienced by recovering patients of the better class, when they become conscious of their surroundings and find themselves in pauper clothes, is often seen in county asylums; and this mental shock very frequently interrupts recovery, if it does not lead to further breakdown.

With insane patients of this class therefore, it is always well to advise application for admission to a registered hospital before allowing them to be sent to the county asylum. Should the case become suddenly urgent and removal from home necessary before the hospital has agreed to take it, by proper application to a constable, relieving officer, or overseer, the patient can be removed for the time being to the workhouse infirmary, under Section 20 of the Lunacy Act. When the patient is removed to a registered hospital he is certified as a private patient, and the usual certificates—a petition, two medical certificates, and a justice's order—are needed. If a vacancy cannot be secured at a registered hospital, the county asylum is the only alternative. Private patients are admitted at most county asylums on payment of from 15s. to 25s. a week, the patient being kept, if possible, in the better wards and wearing their own clothes.

Sometimes the authorities of a county asylum will refuse the application to admit as a private patient on payment of the required fees. When this happens the matter can often be settled by obtaining the admission of the patient as a pauper and by renewing, soon after admission, the offer of the required fees. The authorities then find themselves in a dilemma, and have either to do what they before refused, and to transfer the patient to the "private" class, or to refuse a weekly sum of money above the cost of maintenance. The patient will usually be transferred forthwith to the private class.

When the necessary arrangements have been made for admission, and it is essential that the patient be removed at once, this may be done on an urgency order. The urgency order must be signed, if possible, by the husband, wife, or a near relative of the patient; and if this is not possible, the reason must be stated. The person signing the urgency order must have seen the patient within two days of so signing. A statement of particulars and a medical certificate accompany the order. The practitioner signing the medical certificate must not be related to, nor be partner or assistant to, the person signing the order; he must have personally examined the patient within two days of signing, and must state his reasons for considering the case to be urgent. The urgency order remains in force for seven days, by the expiration of which time the full certificates have to be obtained.

The full certificates for a "private" patient consist of a petition for an order, two medical certificates, and the judicial reception order. The petition must be signed, if possible, by the husband, wife, or a relative of the patient, who must have personally seen the patient within fourteen days of the presentation of the petition. This petition is accompanied by a statement of particulars. The two practitioners signing the medical certificates must have examined the patient, separately from each other and from any other practitioner, within seven clear days of the presentation of the petition; and must not be related to one another nor to the petitioner, nor must either be partner or assistant to the other nor to the petitioner. No medical certificate may be founded entirely on facts communicated by others, but must contain facts observed at the time of examination. It is not essential, however, to put in any facts communicated by others. When the petition and medical certificates are duly filled in and signed, they are taken with the order to a Justice specially appointed under the Act, to a judge of County Courts, or to a stipendiary magistrate, for his signature. The Justice signing the order need not necessarily see the patient, but has to state whether or not he has so seen him. The date of the petition should be the same as the date of the order. The reception order ceases to be valid unless the patient is removed to the institution mentioned therein within seven clear days from the date it was signed.

In the case of a patient who has to be certified as a pauper and removed to the county asylum, the method of procedure is to notify the relieving officer or overseer of the parish that the patient is insane. The person so notified has then to act within three days. If the case is urgent and the patient is not under proper care and control, the facts should be stated to the relieving officer that he may deal with it at once, by removing it to the infirmary. In this case the medical man should also state in writing that the patient is in a fit state of bodily health to be removed.

PUBLIC HEALTH AND HYGIENE.

THE PREVENTION OF TUBERCULOSIS IN CATTLE.

THE relations of bovine to human tuberculosis, whatever view may be held as to the degree in which they operate in the spread of the disease, must now be taken as definitely established. It is even contended by competent observers that bovine tuberculosis as a factor in the diffusion of tubercular infection in man is of importance secondary to no other, and that in the efforts which are being made to limit the disease the control of tuberculosis in cattle is a measure of primary consideration. From whatever point of view the question is approached, whether from the merely economical or from the wider and more concrete hygienic standpoint, it must be admitted that the prevention of cattle tuberculosis is an achievement worthy of national endeavour. An attack, organised and enforced with all the resources of State effort is essential to success.

It is characteristic of English methods that the great municipalities should make the first essays in administrative action, and in the exercise of the powers which Parliament has granted them are to be found the chief attempts which have been made to secure food liable to infection free from tubercular taint. In the absence of public abattoirs, and consequently of any efficient system of meat inspection, it has been found impossible to prevent the sale of tubercular meat, and although under the limitations to which they were subject the officers of the public health service have done much to lessen its consumption, it has to be admitted that the facilities for disposing of tubercular meat have been such as to leave no strong incentive for the farmer to eradicate the disease from his herd.

What are known as the model milk clauses for the prevention of the sale of tubercle infected milk have been incorporated in the private Acts of several of the more active municipalities, but these clauses are cumbersome to work, and cannot be said in effect to have been a serious check upon the sale of milk dangerously impregnated with tubercle bacilli. Doubtless the pressure which these clauses has exercised upon the minds of intelligent dairy farmers has done something to raise the problem of stamping out tuberculosis in cattle to one on the fringe of practical affairs, but so far as the great mass of dairy farmers in this country is concerned, the prevalence of bovine tubercle is an act of God with which only medical and veterinary faddists would have the temerity to interfere.

The Corporation of Birmingham, with commendable enterprise, has opened another chapter in the methods of tackling this difficult problem. About a year ago it appointed a committee to visit and report upon the dairy farms in Denmark, where methods had been adopted for stamping out tuberculosis in the herds. The committee was accompanied by Dr. John Robertson, the medical officer of health of Birmingham; and in the report of the committee and in a paper recently contributed to the Society of Medical Officers of Health are given the results of the inquiry. The committee in its

visits to the Danish dairy farms had the advantage of the presence of Professor Bang, Principal of the Veterinary College at Copenhagen, and of Mr. Markeberg, Government Veterinary Inspector.

"The guiding principle governing Bang's method, as described by himself during the course of our visit, and observed by us in practical operation on the farms visited, is the gradual eradication of infection. He relies upon segregation and isolation, and not upon slaughter. Only cows with tuberculosis of the udder, and wasters manifestly dangerous to others from extensive open generalised tuberculosis, are slaughtered. Essentially his method depends upon (1) the use of tuberculin to diagnose the disease; (2) the complete separation of healthy animals from diseased; and (3) the gradual rearing up of a healthy non-infected stock to replace in due course the infected." By this method between 700 and 800 herds of cattle in Denmark have been freed from tuberculosis.

About a century ago Danish cattle are stated to have been free from tuberculosis, and the disease has been traced to the introduction of infected cattle from Switzerland, Schleswig, and Great Britain. The separation of the healthy from the diseased cattle out of doors is comparatively easily accomplished in Denmark, where it is customary to tether all cattle at grass. The separation indoors has been accomplished by the provision of a partition in the sheds free from a doorway or other opening and the restriction of each group to a separate end of the shed. The calves of tubercle-infected cows are immediately removed from their mothers and fed upon milk heated to 80° C. Herds freed from tubercle are tested twice a year with tuberculin and reactors are at once removed.

As a result of their visits of inspection and of the information they obtained in Denmark, the committee have arrived at the following conclusions:—

1. Bang's method has proved itself in Denmark during the past sixteen or seventeen years to be a practical and economical method of ridding herds of dairy cattle of tuberculosis.

2. They consider it to be a method which may equally well be introduced into this country with a probability of even better results.

3. Although slow in operation, the method has the advantage of not being costly and of causing little or no disturbance to the trade of the milk producer.

The Committee are further of opinion that all cases of open tuberculosis in cattle should be scheduled under the Contagious Diseases (Animals) Acts, and that veterinary assistance and a gratuitous supply of tuberculin should be placed at the disposal of all farmers undertaking to isolate reacting from healthy animals and prepared to keep their stock under satisfactory sanitary conditions.

If concurrently with these measures the larger municipalities will more vigorously exercise the powers with which they have been vested for preventing the sale of tuberculous food, we should see the dawn of a new era in English agriculture.

We have in Bang's method of stamping out tuberculosis in cattle a means of attaining a most desirable end which involves not so much an expenditure of money as the application of intelligence, a knowledge and appreciation of simple hygienic facts and a persevering industry which is assured of reward. No exception can be taken to exacting in full measure these essential qualities of success in an industry where their neglect threatens the public health. But it is certain that the inertia of the

farmer will only be overcome if, while he is instructed and encouraged to abolish tuberculosis from his herds, he is at the same time penalised for the neglect of precautions necessary to obtain the end in view.

The condemnation of tubercular products, whether in meat or milk, were it universally insisted upon, would make it not worth while to permit the unrestrained perpetuation of the disease in animals, while it would undoubtedly reflect itself in improved health in man.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

NOTES ON AN UNUSUAL CASE OF HYDATID CYST.

By WM. H. SMAILES, M.B., B.S.Lond.

I HAVE thought the following case worthy of notice because of the comparative rarity of similar cases outside hospital wards, and especially because of the unusual position of the cyst. The patient, a married woman of 46 with several children, came under observation on account of a large tender swelling situated in the upper part of the left thigh directly over the saphenous opening, and extending backwards between the legs, thus causing considerable difficulty in walking.

The history she gave was that 25 years previously, when working in the mill, she "strained" herself when lifting a heavy weight, and a small lump came down in the upper part of the left thigh, apparently causing symptoms of intestinal obstruction. She recovered from this attack by resting in bed, but the lump got gradually bigger, and the symptoms recurred at intervals, the swelling being inflamed and tender on each occasion. As she was very much opposed to operation from the first, she continued to suffer in this way through this long period of years: her opposition to surgical treatment was increased by the doubt cast upon the diagnosis of hernia by some medical men who saw her. On examination in July 1908 there was a large rounded tender swelling in the upper part of the left thigh projecting backwards in the adductor region, and corresponding in size to a cocoanut: it was fixed in the subcutaneous tissue, but was not adherent to either the femur or the skin, and it appeared to be connected to Poupart's ligament by a band of thickened tissue corresponding in position to the crural canal and about the width of the finger. The resemblance at first sight to one of those large femoral hernias which one occasionally sees in hospital patients was most striking, and, as a slight impulse was thought to be obtained with coughing, the diagnosis of femoral hernia seemed justifiable, considering the history of the illness; the swelling could not be reduced, but occasional attacks of peritonitis in the sac would easily explain this. There was a slight sensation of fluctuation imparted to the hands on palpation, but no hydatid fremitus was observed, and the diagnosis of hydatid cyst was not thought of, though the fluctuation suggested the possible presence of a cyst. On careful questioning it was elicited that 22 years previously she had been to the local hospital, and was there advised to have the swelling left severely alone, as any operation would

kill her. I suggest that the diagnosis here thought of was aneurysm of the femoral artery: this warning had the unfortunate effect of discouraging the patient still further from undergoing any operation at a later date. As all attempts at diagnosis were eventually proved to be wrong, it may be interesting to consider what other possible causes might account for the condition. No abdominal swelling could be made out in the sheath of the psoas or elsewhere, so a spinal origin was excluded: the hip-joint was freely movable, and there was no shortening of the left leg, so that hip-joint disease was negatived. The femur was quite free, excluding any bony origin for the swelling: a tuberculous abscess of this size would certainly not have existed for so long without bursting. The condition might have been a diffuse lipoma, but its behaviour excluded that.

There was a great temptation to explore the swelling, but this was not allowed, and the condition gradually came to a head and burst, the contents of the swelling proving to be daughter cysts varying in size from a marble to a pea, together with strips of chitinous membrane: the patient then gave consent for the natural opening to be enlarged and the cavity lightly scraped. Considerable shock was present and slight fever, but these symptoms speedily cleared up, and after a slight amount of discharge the sinus formed began to heal from the bottom.

Eight months afterwards the sinus was completely healed and the thigh normal in size: no sign of hernia was present, and there was merely the thickened band in the position of the crural canal: the general health was very good—in fact, she felt better than she had done for years, and was putting on flesh; and there were no signs of secondary deposits in the liver or elsewhere. The fluid inside the daughter cysts was non-albuminous, though there were no hooklets, probably from the great age of the cyst.

A possible explanation of this peculiar situation is that the hernial condition was one of omentum only, and that the cyst developed in the tissue inside the hernial sac: the repeated inflammation caused a natural closure of the crural canal, and cured the hernia: the cyst continued to develop and eventually burst, and a spontaneous cure was brought about: hydatid cysts of the omentum are not unknown, but they rarely occur singly.

"THE HOSPITAL"

MEDICAL BOOK SUPPLEMENT.—No. XVIII.

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SURGERY.

A MANUAL OF OPERATIVE SURGERY. By Sir FREDERICK TREVES, Bart., and JONATHAN HUTCHINSON. Vol. I. (London: Cassell and Company. Third Edition. 1909. Price 18s. net.)

ALTHOUGH ostensibly only a new edition, this is to all intents and purposes a new book. Mr. Hutchinson has impressed his personality upon the style and character of the letterpress, has added illustrations—many of them in colour—which greatly enhance the value of the verbal descriptions, and has achieved, we think, his professed aim to preserve "everything of permanent value in previous editions" and, at the same time, to increase its practical utility. He certainly has adhered to Treves' original intention of making no attempt at encyclopædic completeness, but no pains have been spared to ransack the literature—at any rate English literature—so as to ensure the inclusion of most advances in technique of proved importance. There is a healthy dogmatism about a good many statements in the text that will induce the holders of other views to examine the foundation of their own surgical beliefs, without offending their susceptibilities. Despite the prominence most properly given to descriptions of modern theatre conditions, and of ceremonial observances in the temple of Asepsis, there is throughout a noticeable conservatism. It would be out of the question to take the various sections *seriatim*, and although any surgeon could find something with which to disagree in almost any one of them, it would be over some matter of minor importance or detail. Take for example the account of pylorotomy; probably few surgeons would support the old practice of implanting the divided end of the duodenum into the lower end of the partially sutured gastric incision; it may have to be done, but there is a safer way. Similarly, many surgeons do not approve of "lateral implantation" after enterectomy or colectomy, but prefer suture of the divided ends and a subsequent lateral anastomosis. Gastrostomy is a little shabbily treated perhaps, for it is questionable whether one method is always equally applicable. The excellent account of partial removal of the stomach would have gained by allusion to the method of almost complete gastrectomy practised by Moynihan. We think it very doubtful if many of the younger surgeons have a "hernia knife" among their instruments, and certainly a great many have never seen it used; surely the general practice is to divide the constricting band from without inwards. It will be seen that the criticisms we offer are almost captious; that, in itself, may be taken as a measure of the satisfaction with which we have read the majority of what is written. The book can be strongly recommended to all young surgeons; it represents an individual experience and preference, but it is sound surgery. The

man who has read these pages and thought over them in the light of daily practice will find his judgment and decision surer, and will be better able to foresee and avoid accidental complications. The book is well printed and admirably produced.

GUNSHOT WOUNDS. By Major C. G. SPENCER, M.B., F.R.C.S., R.A.M.C. (Oxford Medical Publications: Henry Frowde and Hodder and Stoughton. Price 5s. net.)

WITH the experience accumulated in the Hispano-American, Anglo-Boer, and Russo-Japanese wars on the effects of modern small-bore high-velocity firearms, a succinct text-book of moderate dimensions has for some time been a want. The detailed reports of the medical services in these wars are too long and expensive, the narratives of individual surgeons too personal and not sufficiently confined to military surgery to supply the deficiency. Major Spencer is therefore well advised to publish in extended form the lectures which for the past three years he has given as Professor of Military Surgery at the Royal Army Medical College in London. His work embodies the conclusions and observations of those best qualified to judge of the surgical lessons taught in the three wars we have mentioned. The teaching is rational, consistent, and intelligible, and especial stress is rightly laid upon the points in which the environment of the surgeon on the battlefield modifies the principles of surgery as practised in a hospital ward. Speaking generally, the author is sparing of illustrative cases, nor is this a disadvantage: whenever he does recite one it is always both pertinent and interesting. Professionally some of the most novel lesions dealt with—novel, that is, to a civilian surgeon—are the curious concussions of nerves which sometimes result from the passage of a high-velocity bullet through adjacent tissues. The symptoms resemble, broadly, those of concussion of the brain: there is temporary loss of function without visible lesion, with subsequent complete recovery. We do not remember to have seen these peculiar cases mentioned in the current surgical text-books; but it seems only reasonable that some account of them should there appear, considering the number of medical men who enter the medical services of the Crown either in the regular or auxiliary forces. The chapter on fractures is extremely good, and illustrated by skiagrams which are well chosen and reproduced. In fact it is difficult to find any section to which like praise cannot be awarded. The work can be recommended with complete confidence to all who anticipate that they may ever be called upon to treat gunshot wounds, and that—if contemporary playwrights and many other reflecting people are right—means every qualified medical practitioner in Great Britain.

GYNÆCOLOGY.

TEXT-BOOK OF GYNÆCOLOGICAL DIAGNOSIS. By DR. G. WINTER, Königsberg, and DR. KARL RUGE, Berlin: A Translation after the third revised German edition. Edited by JOHN G. CLARK, M.D. (Philadelphia and London: J. B. Lippincott Co. Pp. 670. Price 25s.)

THE book is, roughly, divided into three sections under the headings "Methods of Examination," "Special Diagnosis," and "Analytical Diagnosis." The second section takes up the great bulk of the work, and naturally deals with the diagnostic points of the various pathological conditions of the female genital organs under their separate headings. Analytical diagnosis, on the other hand, deals with prominent symptoms, such as hæmorrhage, amenorrhœa, dysmenorrhœa, and describes the lines along which the differential diagnosis of the causes of these conditions is to be made. The first section describes carefully the modern methods of investigation, and we are pleased to see that the use of the uterine sound is regarded as by no means a simple operation, not a "necessary part of every gynæcologic examination," and "should be used as rarely as possible." The paragraphs on the use of the cystoscope are very good and clear. The methods of investigation by removal of tissue for microscopic examination are well set forth, and throughout the book the enormous value of the microscope in gynæcological diagnosis is very properly insisted upon. In a footnote the editor mentions the Goodell-Ellinger dilator for investigating the interior of the uterus, which is much used in America. We think he would have been well advised to point out its manifest dangers and disadvantages as compared with metal forms of Hegar's dilators.

The chapters on the normal microscopic structure of the genital organs are excellent, and form a most useful basis for the histological pathology of the subject. Whilst we fully endorse the very complete description of the various forms of endometritis, we cannot think that the terrible titles coined for them by the author can be quite necessary. For instance, "endometritis glandularis ectatica cystica interstitialis chronica" is a triumph of redundancy which does not appeal to us, and, we should expect, would horrify our transatlantic brethren. We should have expected to find some more description of kraurosis vulvæ than is contained in the eleven lines devoted to it, considering it was first described in Vienna. The analytical chapters are well

written, and if we cannot agree with every word in them, especially that on dysmenorrhœa, still we cannot but admire their general arrangement and the admirable method which the reader will acquire by reading them. The illustrations are for the most part very good.

ESSAYS ON THE POSITION OF ABDOMINAL HYSTERECTOMY IN LONDON. By J. BLAND-SUTTON, F.R.C.S. (London: James Nisbet and Co. Pp. 90. Price 2s. 6d. net.)

SIX essays on different aspects of the operation of abdominal hysterectomy are contained within the covers of this monograph, and they are all well worthy of perusal by everyone interested in pelvic surgery. Beginning with the operation for fibroids, the author wastes no time over details of operative technique, save to emphasise the importance of the use of gloves and of celerity in operating. In the latter respect some gynæcologists think Mr. Bland-Sutton has in practice carried his principles, if anything, too far; but it is candidly to be admitted that there are those among his critics whose methods are unquestionably far too dilatory. He pronounces, on the whole, for sub-total rather than total hysterectomy, though he calls attention to the fact that he has performed even the latter operation 200 times, and is therefore familiar with its merits and the indications for it. Another section of this chapter deals with the value of a "belated ovary"—that is, one left behind by an operator performing hysterectomy; while the relation of uterine fibroids to pregnancy is also considered, especially in relation to the "red degeneration" sometimes seen when the two conditions are associated. To injuries of the ureters during the operation a whole chapter is devoted. This complication is without doubt much more common even than Mr. Bland-Sutton's statistics show. A full and satisfactory account of injuries to the uterus contains descriptions of several cases from the literature which are of very great interest and importance; and the succeeding essay upon thrombosis and embolism after operations on the female pelvic organs is also full of practical clinical wisdom. The author's position upon this point is that sepsis, though not necessarily the only cause, is certainly the chief cause of post-operative thrombosis and embolism. The very full bibliographies at the ends of the chapters increase the value of a useful and timely collection of clinical essays.

TROPICAL MEDICINE.

REVIEW OF RECENT ADVANCES IN TROPICAL MEDICINE, HYGIENE, AND VETERINARY SCIENCE, being a Supplement to the third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By ANDREW BALFOUR, M.D., and R. G. ARCHIBALD, M.B., R.A.M.C. (Published for Department of Education, Sudan Government, Khartoum, by Baillière, Tindall, and Cox. 251 pp. Price 10s. 6d.)

THIS forms a supplement to the third Report of the Wellcome Laboratories at Khartoum. Primarily meant to assist medical officers in the out-stations of the Sudan, it will quite likely prove of equal value to others similarly situated in other colonies. Many subjects are dealt with, amongst the most important being bacteriology, climate, dysentery, fevers, hæmatozoa, leishmaniosis, liver abscess, malaria, Malta fever, mosquitoes, paratyphoid fever, piroplasmiasis, plague, sleeping sickness, smallpox, spirochaetosis, sprue, syphilis, ticks, tsetse flies, tuberculosis, yaws, and yellow fever. Considerable advances have taken place of late regarding many of these complaints,

and all recent work will be found in the pages devoted to these subjects. After reading through the whole review one tries to picture the state of mind of the ordinary colonial practitioner after he has perused it—it probably would be one of chaos. Tropical medicine has changed with a rapidity almost incredible, and to keep pace with it the student must be more or less a specialist on many scientific subjects, many of which will not directly affect him in his ordinary medical work in the future. Again almost three-quarters of this recent work deals with diseases of animals, which, useful to veterinary surgeons and scientists, possesses only a minor interest to students who are more concerned with human medicine and clinical studies. Though this is so it is no fault of Dr. Balfour, and one must not condemn the review because it contains so much scientific work. For the student with scientific inclinations it will form an admirable summary of the work of the last few years, and as Dr. Balfour, we think, hints, it will be excellent for students preparing for their Diploma in tropical medicine and hygiene.

PÆDIATRICS.

INFANT FEEDING. By J. S. Fowler, M.D., F.R.C.P.Ed. (Oxford Medical Publications: Henry Frowde, and Hodder and Stoughton, 1909. Pp. 230. Price 5s. net.)

THIS work is described as a practical guide to the artificial feeding of infants. Dr. Fowler states in his Preface that he has not attempted to treat the subject exhaustively, and it is certainly a very grave defect to omit a full description of maternal nursing, the management thereof, and the indications or contra-indications for weaning. Such omissions tend to discredit the natural mode of feeding, though there may be a certain amount of justification for it, since the work is obviously written for the medical practitioner and not for the general public. In the first chapter the vital properties of milk are insisted on, and a certain space is allotted to the varieties of casein, on which the observations of Van Slyke and Hart are apparently adopted in an entirely uncritical spirit. On the composition of cow's milk Dr. Fowler appears to hold uncertain views, for he quotes Van Slyke's analysis in which the percentage of sugar is much higher than that of most chemists, refers to Raudnitz' analysis in the Appendix, and in the body of the book recommends that as a working average the percentage of sugar should be taken as four. On the heating of milk the author's views are quite sound and orthodox. Perhaps

the recommendation that "boiling the milk for five to ten minutes after it is received is perfectly safe and satisfactory" is dangerous advice, for there is no warning that it should be then cooled down rapidly and kept covered up in a cool place. Too great emphasis is laid on securing a sterile food and the application of the surgical principle of asepsis to the baby's diet. For this reason he advocates cooked milk. A caution should be added to the recommendation of enamelled iron ware, for it is liable to splintering, and the chips are not satisfactory additions to the food. The diet advised during the second year is less liberal than usual in London. Dr. Fowler does not add gravy or mashed potatoes until "from the eighteenth month," nor fish, bread soaked in bacon fat, milk puddings, etc., until the latter half of the second year. Four pages on weaning and mixed feeding follows the four pages on the diet for the second year; not an orderly arrangement. These, perhaps, are trivial criticisms. The printing is clear, the paper admirable, and the bulk of the illustrations useless or unnecessary. Pictures of milk, curdled by various methods, resemble white clouds in a dusky sky. Weight charts occupy an undue space. Yet we may sum up the book as quite a valuable guide to the qualified practitioner, provided that he is prepared to fill in the gaps.

EUGENICS AND HEREDITY.

HEREDITY AND DISEASE. A Discussion opened by Sir WILLIAM S. CHURCH, Bt., K.C.B., M.D.; SIR WILLIAM R. GOWERS, M.D., F.R.S.; ARTHUR LATHAM, M.D.; and E. F. BASHFORD, M.D. (Longmans, Green and Co., 142 pages with index and diagrams.)

THE exceptional difficulties which are to be met with in any attempt to consider the phenomena of heredity, are very much emphasised by the publication in book form of the discussion which took place under the ægis of the Royal Society of Medicine. Curiously enough, it is probable that the failure to arrive at any definite conclusion will be of immense value to the study of heredity. Many notable men took part in this debate, and the only inference which we can rationally draw, unfortunate though it may seem, is that the lack of accuracy and tendency to jump to irrelevant and unjustifiable conclusions is exceptionally marked in these pages. Dr. Mercier's paper, which begins with a just indictment of these fallacious methods, ends unfortunately with an acceptance of the "Mutations Theorie" of De Vries which, so far as biology is concerned, is at present a matter open to discussion. Mr. Mudge is principally concerned with an attack upon Professor Pearson, which naturally is not conducive to the furtherance of the question for debate, while Professor Pearson, who contributes two papers, is obliged to devote the second to his own defence. But, if we consider the careful statements of Sir William Gowers, of Dr. Bullock, and the other contributions of a more medical nature, we cannot fail to be impressed by one benefit which must accrue from this meeting—a more scientific attitude of medical men to the possibilities of heredity. There can be no doubt about the necessity for collecting material, both in the case of normal and abnormal members in a family; it is equally imperative to insist upon caution and reticence in the expression of inferences from the material collected. In fact, it might be suggested that the Royal Society of Medicine should consider the formation of some office to which records and genealogies might be sent, and the material and evidence thoroughly tested. At present, there does not

seem to be any absolutely incontrovertible test of heredity, and until such be discovered, all statements must be made with certain reservations. Although, according to Professor Pearson, the bulk of biologists hold as untenable the inheritance of acquired characters, there is no need for the blind acceptance of their view, which is simply based upon the theories of Professor Weismann. "No disease," as Sir William Church observed, "which arises from or is associated with the presence of a foreign body, whether living or dead, within us can be considered hereditary," and the field is still open for further investigation and the evolution of some practical and applicable theory.

THE EUGENICS REVIEW. (Published quarterly by the Eugenics Education Society. Price 1s. net.)

HOWEVER much we may be in sympathy with the objects of this society, we must protest against one or two features which are noticeable in this review. Dr. Saleeby offends against the principles of true science by a kind of pretentiousness which is painfully obvious on page 41. He speaks of "some observations not yet published by the Mendelians, which show that there is in the hen a definite brooding instinct." Whatever Mendelism may or may not prove, it is still only an hypothesis upon which much more work remains to be done. If these observations have not been published by their author or authors, Dr. Saleeby has no right to use them in this cut-and-dried popular way. No cause is furthered by such slipshod work, whether the permission of the authors to make this statement has been obtained or not. It is clearly an attempt to acquire authority by means of a special revelation, and as such is unscientific. We cannot, on the whole, recommend this review, or, to be more accurate, we think that the review is at present superfluous. The publications of the Eugenics Laboratory are quite sufficient to bring the eugenics work before educated men, and this attempt at a popular appeal does not seem felicitous. Such a publication as the present is likely to do more harm than good, particularly if subsequent numbers contain statements of the same calibre as those made by Dr. Saleeby.

MISCELLANEOUS ITEMS.

MEDICAL REPORTS OF THE CENTRAL LONDON THROAT AND EAR HOSPITAL. Vol. I. (London: Adlard and Son, 1908. Pp. vi. + 134. Two plates and eight illustrations. Price 5s. net.)

The Staff of the Central London Throat and Ear Hospital having decided to issue Reports, the first volume has now duly appeared. It is not clear whether it is intended to continue these Reports regularly, but they will presumably be published at comparatively long intervals, as the cases described in the present volume go back as far as 1901. The volume contains several articles of interest to the specialist, notably one by Dr. Dundas Grant on the treatment of phlebitis of the lateral sinus, in which he points out that ligation of the internal jugular vein does not cut off all the avenues of systemic infection and should be avoided when sufficient disease is found in the sinus to explain the symptoms. The opinion which he expresses in another article, that it is advisable to leave the matrix of a cholesteatoma when it is smooth and complete, will meet with less general acceptance. There is an interesting communication by Dr. Wyatt Wingrave on the presence of acid-fast bacilli and spirochætae in aural discharges; and some points of interest may also be gleaned from Dr. Kingsford's summary of the anæsthetics administered at the hospital. We are surprised to find from this review that all operations for tonsils and adenoids are performed in the sitting posture; ethyl chloride is now almost exclusively given, and specific mention is made of several cases under six months old; although there have been no fatalities, and although there may be little danger in very expert hands, we cannot agree that it is the safest position in which to perform this operation on young children. The volume is well worth perusal by those interested in the special subjects concerned.

INTERNATIONAL CLINICS. Seventeenth Series. Vols. III. and IV. (Philadelphia and London: J. B. Lippincott Company.)

We have on several occasions had the pleasure of welcoming the successive volumes of the "International Clinics" and of commending them to the attention of our readers. The standard of excellence which we have recognised in previous issues is well maintained in the latest numbers of the series, and the contributions, as usual, embrace practically all the departments of professional activity. Even to mention the several articles is impossible in the space at our disposal, but as an indication of the wealth and variety of the fare provided an allusion to one or two contributions may be permitted. Thus in the Medical Section is a careful study of Blood-Pressure in Tuberculosis, by Dr. W. B. Stanton, and an elaborate article on Cardiac Arrhythmias and their Clinical Significance, by Dr. A. W. Hewlett; the latter paper has a special interest as the author does not adopt in all respects the interpretation of the venous pulse tracings now generally current. Other contributions which will appeal to the physician are The Action of Metallic Ferments in the Treatment of Pneumonia, by Professor Robin, of Paris, and the Treatment of Diabetes, by Dr. David L. Edsall. The Surgery of the Blood Vessels (Dr. J. E. Sweet), Contraction of the Tendo Achillis (Mr. A. H. Tubby), and Torsion of the Testicle (Mr. Edred M. Corner), are interesting features of the Surgical Section. These on the present occasion must suffice us, but there is hardly a department of professional work in which the practitioner will fail to find in these volumes something of interest and value. The Editor is to be congratulated on the attractive and serviceable papers he is able to submit to the profession.

A HISTORY OF THE READING PATHOLOGICAL SOCIETY. By JAMIESON B. HURRY, M.A., M.D. (London: John Bale, Sons and Danielsson, Ltd. With 10 Illustrations. Pp. 179. Price 7s. 6d. net.)

In the volume before us the President of the Reading Pathological Society gives a short account of the history and vicissitudes of one of the oldest and most vigorous of provincial medical societies, from its inception in 1841 to the present day. Founded by a number of practitioners in the locality, the society owed much to the encouragement and practical assistance of the Governors of the Royal Berkshire Hospital, who from the commencement placed a room in the hospital at the disposal of the members for their meetings. Throughout its career of nearly seventy years the society seems to have maintained a high level of distinction, both as to the quality of the papers read at its meetings, and as to the attainments of its members and the orators who have been honoured with the task of reading the annual address. These latter comprise many whose names are pre-eminent in the medical world. The author's task has evidently been a labour of love. He sets forth a summary of each session with a list of the papers read, cases shown, and pathological specimens exhibited. A number of portraits of officers of the society are scattered through the book, which is completed by a series of appendices, which include a catalogue of the specimens in the society's pathological museum and a description of its library. The author's enthusiasm, where it occasionally runs to excess, will no doubt be forgiven by his fellow-members, who owe him a debt of gratitude for his exhaustive labours on behalf of their society.

THE SPORTSMAN'S GUIDE TO NORTH-EASTERN RHODESIA. By J. DUNBAR-BRUNTON. (London: The Scientific Press, Ltd. 1909. Price 2s. 6d. net.)

THIS brief monograph contains a good deal of excellent advice in small compass. Its scope is sufficiently indicated by the title, but as a matter of fact the greater part of the contents will apply to any part of tropical Africa which is visited by big-game shooters. As it is intended for laymen the hints on the preservation of health are not of the comprehensive nature which would be expected of a medical manual; but they are sound as far as they go. The very brief vocabulary of useful words in three native languages might with advantage have been somewhat longer. An excellent map is provided, and probably accounts for the price at which the book is published. Any medical man whose lot takes him to this distant region can be advised to pack this guide among his kit. If anything, we think the author might have been rather more liberal also in notes on the big game of this province.

THE "NAUHEIM" TREATMENT OF DISEASES OF THE HEART AND CIRCULATION. By LESLIE THORNE THORNE, M.D. (London: Baillière, Tindall, and Cox, 1909. Third Edition. Price 3s. 6d. net.)

THE fact that this book has reached a third edition testifies to its popularity. It fully merits the reception it has had. The main object of the work is to indicate succinctly how any medical practitioner in England can carry out the details that are essential to the Schott-Nauheim treatment by baths and by graduated exercises without sending his patients away at all. The excellent illustrations of the various resisted movements are a great feature of the book; they make each exercise as easy to follow as can be. We strongly recommend the work to every practitioner.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

THE FINANCIAL PROBLEM OF THE VOLUNTARY HOSPITALS.

POSSIBLE EFFECTS OF THE BUDGET.

THOSE who are responsible for raising the money for hospital purposes in this country must regard the Budget introduced by Mr. Lloyd George with something like dismay. With the exception of two types of hospital financiers, those who understand their business properly have been encouraged rather than depressed of late years by the results of their efforts. It is not a little remarkable that, excluding legacies, the ordinary income of 796 voluntary hospital in 1906 should shew an increase of upwards of £100,000 compared with the previous year, the total sum raised in ordinary income in 1906 amounting to no less than £2,558,000 in round figures. This ordinary income has increased from £1,931,000 in 1896 to £2,558,000 in 1906, an increase of 33 per cent. The total income from all sources has increased in the ten years from £2,528,000 to £3,673,000, an increase of 45 per cent., although the yield from legacies in the latter year only shews an increase of 13 per cent. compared with the receipts from this source in 1896. These figures afford striking testimony to the liberality of the public where hospitals are concerned. This popularity has greatly and deservedly increased of late years, owing to a continuous increase in the average efficiency throughout the country. The increase in the yield of contributions from voluntary sources is, however, largely due to the extension of the area of givers, owing mainly to the work of the League of Mercy, which has now some 15,000 honorary workers constantly engaged in pressing the claims of the hospitals mainly upon the smaller givers, and of the steady growth in public confidence in the administration of metropolitan hospitals, owing to the establishment of the King's Fund.

It may be justly said, in view of the figures and results just recorded, that hospital managers should have relatively little anxiety in regard to their revenues. The last twelve years have been years of depression, especially in the metropolis, and it is very remarkable that, despite this fact, the yield in voluntary income should have steadily and largely increased. But for this very reason, especially when we take the sources of revenue and examine them in detail, those responsible for the management of the voluntary hospitals must regard the present Budget with feelings of grave alarm. THE HOSPITAL has nothing to do with politics, and we propose to deal with the Budget from a business point of view entirely, as the great City merchants who signed the protest against it have dealt with it. The mischief of the Budget is that it has written all over it startling evidence that many matters have been introduced, the bearing of which has not been grasped, if it has even been seriously studied by the present Chancellor of the Exchequer. He has

succeeded, largely owing to this fact, in exciting universal misgiving amongst the very people who form the backbone for revenue purposes not only of the hospitals but of the nation. Serious men dare not interfere with their own business in this hurried, careless manner, and they feel that such treatment of national finance is a dangerous novelty in the history of British Budgets, the meaning and nature of which prudent men cannot estimate. So the gravest uneasiness has been caused where such a feeling might and ought to have been prevented by the exercise of adequate care on the part of the Chancellor of the Exchequer, who would so have worthily followed in the footsteps of the many great men who have preceded him in this important office. No more striking proof of hurry and inadequate attention and knowledge on the part of the present Chancellor of the Exchequer could be afforded than the fact that it is currently believed, and the evidence on this point is striking, that Mr. Lloyd George himself does not yet know the nature or bearing of the clauses in the Financial Act based upon the Budget, which has yet to be introduced. Hence prudent people are alarmed, as we have said, and when a prudent business man is alarmed about money, he cuts down his expenditure and curtails it in every possible direction. It is well known that in regard to bills many people have acquired the habit of putting the doctor's account at the bottom of the file on the ground that he is a member of a great profession and cannot possibly be in need of money. So too the majority of people, when they are pinched for funds, economise by cutting off charitable gifts or reducing them to a minimum. Should the present alarm created by the Budget continue there is no question that the revenues of the hospitals from voluntary sources must be greatly reduced in the course of the present year.

The vulnerability of hospital revenues will become apparent when we state that 114 of the great general hospitals in the United Kingdom derive 21 per cent. of their ordinary income from annual subscriptions, the yield in London from this source being only 12 per cent. Fifteen per cent. came from donations and boxes against 19 per cent. in London, Hospital Sunday produced 6½ per cent., Hospital Saturday 4 per cent., and workpeople's contributions 8½ per cent. It is worthy of note that in London the yield from Hospital Saturday is only 1½ per cent. and from workpeople's contributions only ½ per cent., that is to say one thirty-second of the actual sum received from this source by provincial, Scotch and Irish hospitals. The case of special hospitals throughout the United Kingdom is equally serious, the yield from various voluntary sources during 1907 being as follows: annual subscriptions 26 per cent., donations and boxes 22 per cent., Hospital Sunday 7 per cent., Hospital Satur-

day 2 per cent., and workpeople's contributions $1\frac{2}{3}$ per cent. In London the general hospitals received $9\frac{3}{4}$ per cent. of the King's Fund, whilst the special hospitals received $11\frac{1}{4}$ per cent. from the same source. These figures should be noted, because it has been stated in the *Medical Press* and elsewhere that the awards of the King's Fund have shewn a marked unfairness to special hospitals. These figures emphatically prove the falsity and unreasonableness of any such statement. It is well to note too that Hospital Saturday only produced $1\frac{1}{2}$ per cent. of the income of the great general hospitals in London, compared with 4 per cent., the average yield from this source as represented by the accounts of 114 of the great general hospitals in the United Kingdom.

We may add that the 114 great general hospitals in the United Kingdom derived 35 per cent. of their income from invested property, whereas 46 per cent. of the revenue of London hospitals comes from this source. The invested funds of special hospitals are much smaller, the annual yield from this source having been $18\frac{1}{2}$ per cent. from the whole country and 15 per cent. from the metropolis. Sixty per cent. of the revenue

of the hospitals of the United Kingdom is derived from voluntary sources, and the greater part of this might easily become forfeit should the public alarm created by the present Budget prove well founded.

Whether it is or not the crystallised proposals of Mr. Lloyd George, as embodied in the Finance Bill, which is awaited with grave anxiety by men of business in all parts of the country and of all shades of political opinion, will testify. We cannot in any case forget that his proposals so far as they are at present understood have created grave apprehension throughout the business world in the minds of the very classes who in the past have supplied the resources upon which the voluntary system of hospital support depends for its maintenance. If these resources were withdrawn the taxpayers would have to find, as the figures we give at the commencement of this article prove, at least two millions a year for the maintenance of hospitals, and in a few years, should they become State institutions, there is little doubt that the taxpayers would have to find from four to five millions annually, or the sick and suffering poor of these islands must be deprived of much of the medical aid and comforts which they now enjoy under the voluntary system.

THE CHEMISTS' EXHIBITION.

THIS Exhibition was held at the Horticultural Hall, Westminster, S.W., on May 10 to 14 inclusive. Much credit is due to the organisers, "The British and Colonial Druggist," for the arrangements and management, which fully provided for the convenience and comfort of visitors and exhibitors. Both in the interest of exhibits, and the extent and quality of attendance, the Exhibition was highly successful. There was much to arrest attention from a medical standpoint. In this respect the British Drug Houses, Ltd., gave striking examples of what can be accomplished in inorganic chemicals; and Messrs. Arthur Cox and Co., Ltd., the pill manufacturers, of Brighton, attracted interest with their lactic tablets, Tholaform tablets, and hæmostatic Styptirenal. Messrs. Baiss, Brothers and Stevenson gave special prominence to their cod-liver oil preparations; while Messrs. Parke, Davis and Co., Eucryl, Ltd., and Thomas Christy and Co. had extensive displays of toilet preparations.

Natural mineral waters were a feature of the Exhibition. Mention may be made of "Magi," a radio-active natural water, with distinctive therapeutic properties, shown by the Caledonia Springs Co., Ltd., and Friedrichshall water, often described in hepatic disorders. Messrs. Ingram and Royle, Ltd., invited attention to their Carlsbad water, Carlsbad Sprudel salts, and Cheltenham Spa water; while Messrs. Findlater and Co., who of late have devoted themselves to the importation of Continental mineral waters, had on view the Wildungen, Martigny, and Carabafia waters. The Sanitas Co., Ltd., gave an extensive display of their various disinfectants, soaps, etc.; their sanitary floor polish for hospital use; and Sanitas-Bactox for medical and obstetrical work. Messrs. Howison and Co., manufacturers of surgical rubber goods, made a prominent feature of gloves for operations and post-mortem examinations. This firm might with advantage direct their energies to the supply of india-rubber goods to hospitals.

NEW APPLIANCES AND THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

"VAPOROLE" AROMATIC AMMONIA.

Messrs. Burroughs and Wellcome have sent us samples of a convenient means of instantly obtaining ammonia for inhalation in cases of fainting, etc. "Vaporole" Aromatic Ammonia presents a solution of ammonia gas with aromatics ready for immediate use in emergency. This ingenious little appliance should prove more reliable than ordinary smelling salts, which rapidly deteriorate. Each "Vaporole" Aromatic Ammonia contains a small quantity of solution in a capsule surrounded by absorbent material, the whole being enclosed in a covering of silk. When required the little capsule, which resembles that used for Amyl Nitrite, may be fractured by pressure between the fingers and the vapour inhaled. "Vaporole" Aromatic Ammonia is issued in aluminised boxes of 12, which easily fit the waistcoat pocket. Medical men and dental surgeons will no doubt welcome this novel and portable form of smelling salts. The vapour is pleasant and effective.

FRY'S COCOA AND CHOCOLATE.

Messrs. J. S. Fry and Son, Ltd., of Bristol, have sent us lately a sample of their excellent Pure Concentrated Cocoa, which has long been recommended by the medical profession for its solubility, pleasant taste, and digestibility. They also forwarded a box of a new variety of sweetmeat, which they have supplied to the King and Queen of Spain, and have named "Reina Victoria Eugénie" Chocolates. These are mixed chocolates—very dainty in appearance and excellent in flavour, and packed in artistic boxes.

MR. JOSEPH CHAPMAN, of Cleethorpes, who died last week, leaving estate approximately worth £250,000, bequeathed large legacies to the Brompton Hospital and other London hospitals, while the residue of his estate reverts to the Grimsby and District Hospital, and will amount to several thousands of pounds.

NEWS AND COMING EVENTS.

DR. STUART McDONALD, F.R.C.P.E., the well-known Edinburgh pathologist, has recently been appointed Professor of Pathology in the College of Medicine, Newcastle-on-Tyne, which is the Medical School of the University of Durham, and Pathologist to the Royal Victoria Infirmary, Newcastle.

ACCORDING to the New York correspondent of the *Times*, telegraphing on May 16, the fight against tuberculosis in that city continues with unabated vigour. Chicago recently, by a referendum, sanctioned the levy of a tax for the erection and maintenance of a sanatorium for consumptives, and Governor Hughes has just signed Bills authorising New York City and the counties of the State to establish similar hospitals. The same informant states that the Health Commissioner for New York publishes figures showing that the death-rate for the city from tuberculosis in 1908 was the lowest on record. The number of cases reported during the last two years has increased, but this the Commissioner attributes to earlier and more complete registration.

THE fifty-seventh annual meeting of the governors of the Hospital for Sick Children, Great Ormond Street, was held at the hospital on May 13, the Duke of Fife, president, in the chair. The report of the committee naturally dwelt upon the completion and opening of the new out-patient department. In-patients in 1908 numbered 3,449, or 274 more than in 1907; and the daily average number of resident patients rose from 182 to 189. Out-patients, on the other hand, showed a falling-off. The income was £24,188, and the expenditure £23,474. The midsummer fair and fête at Olympia will be opened on June 23.

A FESTIVAL banquet in aid of the Maintenance Fund of the Mount Vernon Hospital for Consumption and Diseases of the Chest was held at the Hôtel Cecil last week. Lord Clifden, Deputy-Chairman, presided, and in proposing "Prosperity to the Mount Vernon Hospital," he stated that the number of beds now occupied was 226, including 120 at Hampstead, and 106 at Northwood. During the last year 3,000 new patients were treated in Fitzroy Square. The treatment at Hampstead compared favourably in its results with that at any similar institution. The actual expenditure required was £18,000 per annum, and last year the average expenditure per patient per week was £1 5s. 4d. Mr. Stedall, in acknowledging the toast, referred to the recent establishment of a special ward of eight beds for treatment by serum therapy. The Secretary announced subscriptions amounting to £2,180 16s.

THE seventy-seventh annual meeting of the British Medical Association will be held at Belfast from July 23 to July 31, 1909. The President-elect is Sir William Whitla, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast. The presidential address will be delivered on Tuesday, July 27, and the sections will meet on the three following days. The annual representative meeting will begin on Friday, July 23, 1909. The address in medicine will be delivered by Dr. Robert W. Philip, M.D., F.R.C.P. (Edin.), Physician to the Royal Infirmary, Edinburgh. The address in surgery will be delivered by Mr. A. E. J. Barker, F.R.C.S., Professor of Surgery, University College, London. The address in obstetrics will be delivered by Sir John W. Byers, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast. The popular lecture will be delivered by Dr. J. A. Macdonald, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE Danish Royal Scientific Society has admitted as a foreign member Dr. Dreyer, Professor of Pathology in the University of Oxford.

At a meeting of the Welsh University Court, held at Mold on May 14, Sir Isambard Owen was again re-elected Senior Deputy Chancellor and Sir John Williams was elected Junior Deputy Chancellor.

THE new out-patients' department at the Royal Portsmouth Hospital was opened on May 11. This department has been erected at a cost of £4,000, which was given by Mr. Woolmer White, of Havant.

THE honorary degree of LL.D. of the McGill University of Montreal will be conferred on Dr. George A. Gibson, M.D., D.Sc., F.R.C.P. (Edin.), the distinguished Edinburgh physician at the Medical Convocations on June 9. Dr. Gibson gave the Inaugural Address of the Medical Faculty of the McGill University last September.

THE course of four lectures on Statistical Methods in Physiology and Medicine at the London Hospital Medical College, by Mr. Major Greenwood, jun., M.R.C.S., L.R.C.P., is just commencing. The first lecture was on Friday, May 21, at 4.30 p.m., and the course will be continued on June 4, 11, and 18. The lectures are open to students of the University of London, and others on presentation of their cards.

THE Harben Lectures of the Royal Institute of Public Health will be delivered this year by Professor R. Pfeiffer, Director of the Hygiene Institute, Breslau, in the Lecture Room of the Institute, at 6 o'clock, at 37 Russell Square, London, W.C. The first lecture, on the Importance of Bacteriolysins in Immunity, will be given on Monday, June 21; the second, on Endotoxins and Anti-endotoxins, on Wednesday, June 23; and the third, on the Problem of Virulence, on Friday, June 25.

BEQUESTS AND DONATIONS.

LIEUT.-COL. JAMES MILLER, of Wheatley, Oxon., and Portland Place, W., formerly of the 11th Hussars, left £1,000 to the Evans Cottage Homes, Birmingham, and £500 to the Radcliffe Infirmary, Oxford. Mr. Robert Low, of Palace Court, Bayswater, W., left £1,000 to the Stationers' Company, upon trust to apply the income annually at its discretion in charitable gifts; also £500 each to the Westminster Hospital and the Brompton Hospital for Consumption; and £200 each to St. Mary's Hospital, Paddington, and the West London Hospital. Mr. Benjamin Collins, of East Finchley and Clerkenwell, bookbinder, left £630 each to the Great Eastern Hospital for Children, the London Hospital, and the Tottenham Hospital.

OBITUARY.

DR. HILLES WYNKOOP, the well-known New York surgeon, died last week in that city. The cause of his death is stated to have been appendicitis. He was 66 years of age.

DR. ERNEST ALFRED SNAPE, honorary physician to the Cripples' Home, St. Marylebone, and the Governesses' Benevolent Institution, died last week in London from appendicitis. He was educated at Charing Cross Hospital, University College, London, and the University of Brussels, where he took the M.D. degree in 1893, after qualifying in London six years previously. He was captain in the

R.A.M.C. Territorial Force and Past-President of the Brussels Medical Graduates' Association.

MISS CHARLOTTE LOUISA ELLABY, M.D.(Paris), L.S.A., died on May 13 at the age of 55. She obtained the M.D. degree of the University of Paris in 1884, and became a licentiate of the Society of Apothecaries in 1889. She had been second physician to the Cama Hospital in Bombay, and was ophthalmic surgeon and subsequently consulting ophthalmic surgeon to the New Hospital for Women. Dr. Ellaby was lecturer on ophthalmic surgery at the London School of Medicine for Women and a member of the Faculty of Medicine of London University, and has contributed several papers in French to the *Archives d'Ophthalmologie*.

THE death of Dr. Edward George Whittle, M.D.(Lond.), F.R.C.S.(Eng.), who for the past 33 years had resided at Brighton, is announced to have taken place at Las Palmas, at the age of 59. Dr. Whittle was one of the leading practitioners of Brighton until his retirement from active work a few years ago. After studying medicine at University College Hospital, he qualified in 1873, and subsequently obtained the higher degree and diploma of the University of London and the College of Surgeons. He was President of the Brighton Medico-chirurgical Society in 1891, and for some years he was honorary physician to the Brighton and Hove Dispensary and surgeon to the Royal Alexandra Hospital for Children.

The death has lately occurred, at the age of 69, of Dr. Percy Boulton, M.D., M.R.C.P., the well-known obstetrician and gynaecologist. His father was the late Dr. R. G. Boulton, M.D., J.P., of Beverley, Yorkshire, and he was educated at Beverley Grammar School and Edinburgh University, where he took the M.D. degree in 1862. Sixteen years later he obtained the membership of the London College of Physicians. He practised at first in Nottinghamshire, but came to London in 1865, and was for 30 years physician to the Samaritan Free Hospital for Women and Children. Dr. Boulton was Vice-President of the Obstetrical Society of London, and for a short time was physician to Queen Charlotte's Lying-in Hospital. For eight years he edited the Obstetrical Society's "Transactions," and he was an Examiner and Chairman of the Examining Board of that Society. He was also consulting physician to the British Home for Incurables. Dr. Boulton was an early and ardent worker in the cause of compulsory registration for midwives, and was the author of a number of obstetrical papers and the editor of the fourth edition of "Tanner's Index of Diseases."

EDITOR'S LETTER-BOX.

"THE CAUSATION OF SEX."

To the Editor of THE HOSPITAL.

SIR,—You will, I feel sure, allow me to reply to the review which appeared in THE HOSPITAL of April 24 of my book "The Causation of Sex," the more so as I am therein stated to make use of an illogical argument. Your reviewer first complains of my remarks being "too reiterative." This is scarcely fair criticism, as in the Introduction, p. 4, I claim the indulgence of the reader for reiteration, for I point out that "emphasis requires repetition and hence I fear the narrative suffers thereby." It is certainly gratifying that your reviewer could find fault with little beyond that for which the writer had already apologised.

Your reviewer next states that I illogically claim that the right ovary produces boys *because* it is the larger ovary and more boys are born than girls. This is certainly not

my argument. I prove, as I think, from cases of normal pregnancy boy in utero, corpus luteum in right ovary; of ovarian pregnancy boys developing in right ovary, and girl in left ovary; of tubal pregnancies male in right tube, corpus luteum in right ovary; also from birth of boys only when left ovary was proved to be congenitally absent; as well as from cases of unilateral ovariectomy—that male children are derived from ova from the right ovary, and similarly females from the left ovary only.

Then I point out what is often overlooked, namely the anatomical fact that the right ovary is larger than the left, and therefore capable of producing more ova; we thus get the explanation why more boys are born than girls, because from the larger or right ovary I have just proved only male ova are derived. Similarly, we see why twin boys far more often appear than twin girls, because the larger area of ovarian tissue on the right side is more likely to produce two ova at or about the same time than the smaller area of the left ovary would be. Your reviewer appears to be surprised that I have not explained that the larger R. ovary "is simply in accordance with the more general right-handedness of men and women." I should certainly deny that this is cause and effect. If your reviewer credits it perhaps he will explain why, in spite of the right-handedness of men, the left testicle is larger than the right; and, though most women are right-handed, why the left kidney is larger and heavier than the right.

Re polyspermy, there is not the slightest evidence (only analogy derived from the invertebrata) in favour of only one spermatozoon being in mankind, not only the fertilising agent, but having also within it sufficient male germinal plasma to convey to, or impart, the divers male or paternal hereditary variations, characteristics, and peculiarities, including shape of ears, nails, nose, etc., size of head, mouth, feet, etc., colour of hair, skin, eyes, etc., tendencies to various diseases, and a hundred and one other details, which in varying combinations account for the differences, mental, moral, and physical, seen when there are several children to the same two parents.

Yours truly,

Broadstairs.

E. RUMLEY DAWSON.

"A CRITICISM OF HOMŒOPATHY."

To the Editor of THE HOSPITAL.

SIR,—Despite Dr. Heaney's courtesy I have evidently failed in my previous letter to make the position of homœopaths clear. May I try again?

The believer in homœopathy maintains that, given a case of disease presenting certain symptoms, the remedy most likely to benefit it is that remedy which has shown itself capable of producing symptoms which most closely resemble those of the case demanding treatment—e.g. treat acute nephritis arising from scarlet fever with cantharides, which can produce (in large doses) acute nephritis. This principle is summed up in the general recommendation, "Let likes be treated with likes," which is not equivalent, as Dr. Heaney seems to think, to "Let identicals be treated with identicals." Now this recommendation, *similia similibus curantur*, was deduced from experience and is confirmed for those who hold to it by their daily practice. It is pre-eminently a matter that lends itself to experiment, and we physicians claim to be scientific men. Therefore I deprecate question-begging phrases like "discredited generalisation." Patient and careful investigation will enable any physician to have a basis of actual experience for his opinion, and I submit that only then does it become really a valuable contribution to the discussion.

Yours faithfully,

C. E. WHEELER.

NURSING ADMINISTRATION.

THE PATIENTS' RIGHTS.

LOGICALLY the patients' position in hospitals and homes is a very strong one. The appeal for funds is made on their behalf. The whole establishment has no other *raison d'être* in the eyes of subscribers but them. The money is given expressly to minister to their wants, and those who give it are, generally speaking, extremely indifferent to the advance of science, the success of a medical school, or the status of a training school for nurses. Yet it is indisputable that a certain school of nurses regard the theory of patients' rights with some impatience. Of course, they would admit that broken legs must be properly mended. The healing process helps to train a probationer, to instruct a student. But the owner of the leg is a nuisance. They do not say this crudely. But they act it, and even put the thought into words in conversing of their patients. The manner engendered by this tone of thought is intensified when patients are not birds of passage, presenting each some fresh matter for observation and professional interest, but are chronic or incurable. Their idiosyncrasies are then too often regarded with a disfavour of which every patient soon becomes aware, and when the institution is largely staffed by untrained or partly trained people, the results are inhumanity, none the less shameful because directed against hearts and minds, seldom manifested in open bodily neglect or cruelty. Before trained nurses were introduced into incurable homes, some of these costly establishments were the scenes of much preventable unhappiness. Discipline was overdone. The attendants assumed a harsh control, and the art of managing fretful sufferers was entirely ignored. In spite of expensive equipment, palatial accommodation, and the efforts of benevolent visitors bent on alleviating suffering, the incurable were often needlessly worried and humiliated, and their comfort was continually put aside at the convenience of those who were appointed to relieve them. Then came a reaction. It began to be felt that patients were entitled to that consideration and respect without which life is intolerable wherever it is lived, and the theory that they ought to be constantly simmering with gratitude while maintained in subservience by sour and over-taxed officials, vanished.

But is there not some danger that in the eagerness to promote contentment the managers in at least one of these establishments are setting to work injudiciously? They appear to conceive that it is possible to maintain a reign of tender humanity towards the patients by means of ceaseless vigilance from without. There never was a more fatal mistake. Difficult of accomplishment, even when surveillance relates to one patient under a nurse at home, it is strangely impracticable when it is attempted over officials in an institution. The spirit of humanity which takes every patient, and enfolds them in a mantle of friendly care, can only be set stirring through the agency of the matron, and, if she is to produce it, those who appoint her must give her full powers. It is not a particularly easy thing to produce

this atmosphere among hundreds of sufferers, each one of whom is naturally disposed to centre round self. First and most essential is it that the matron have herself a true vocation, leading her to behold in the wasted bodies and too often maimed minds of her charges the image of her Master—faint it may be, yet never effaced. Unless she is herself reverent in her attitude towards suffering, very pitying in her attitude towards the defects in character occasionally induced by defects in bodily powers, she will labour in vain to make her household contented. In the difficult but very beautiful work which has to be accomplished among the incurable, the matron must lead the way. She cannot hope to stand outside and produce by discipline among others a tone lacking in herself. But when the mind is attuned, it is but the first step. There is still all to do before the right ideals can be translated into act.

And this we believe is where the managers of these homes go astray. They underrate the enormous practical difficulties in the way of nursing incurables and the heavy strain on the nurses whose days are spent in the performance of somewhat depressing routine duties among those whose condition admits of little except alleviation. Nothing but exact discipline can maintain a home of this description in good order, and unless the matron has entire control exact discipline is not to be had. The policy of encouraging complaints to outside authorities may to the unexperienced appear a short cut to securing the comfort of the patients. In reality, for every omission corrected by this means a loophole is made for far more serious abuses. Once loosen the matron's responsibility by ever so little and a rent is made in the fabric which will assuredly wreck the tone of the whole establishment. The patients ought to be able to rely on their matron as their advocate and best friend. They ought to understand that she is working to her utmost to procure them skilled nursing and unfailing attention. They are capable of understanding that with all her care occasional misadventures will occur, that not all nurses are absolutely perfect, and that when the machine is working at its best there is always something to put up with. But when once the right tone of confidence is established, that sensation as of a family party which has long been such a delightful feature of the Middlesex Hospital (to name but one institution where incurable wards are managed to perfection), it is amazing what generous consideration will be shown by the patients towards their nurses. The highest gift which can be bestowed on sufferers is the gift of conscious self-control, of humorous acceptance of unavoidable contretemps, and desire to spare the labourers on their behalf. All this is ruined by a system which perpetually seeks occasion against those who serve the sick. The relation between nurse and patient is too delicate to bear the interference of an outside authority. It is only when the patients begin to forget the existence of "wrongs" that their rights can be considered secure.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, MAY 24 TO MAY 29.

LONDON SCHOOL OF CLINICAL MEDICINE,
Seamen's Hospital, Greenwich, S.E.

At 3.30 p.m.

May 26, Mr. Cargill, Glaucoma; its Symptoms, Physical Signs, and Pathology.

At 3.15 p.m.

May 28, Mr. McGavin, Psoas Abscess; its Origin and Surgical Treatment.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

May 25, Dr. B. Price, The Various Forms of Congenital Heart Disease and their Diagnosis.

May 27, Mr. H. W. Carson, Catarrhal Deafness.

MEDICAL GRADUATES' COLLEGE AND
POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

May 24, Dr. H. G. Adamson, Skin.

May 25, Dr. C. Theodore Williams, Medical.

May 26, Mr. Raymond Johnson, Surgical.

May 27, Sir Jonathan Hutchinson, Surgical.

May 28, Mr. Ernest Clarke, Eye.

At 5.15 p.m.

May 24, Dr. F. J. Smith, The Treatment of Typhoid Fever.

May 25, Dr. T. N. Kelynack, Open-air Schools for Tuberculous Children.

May 26, Dr. R. W. Allen, The Pathology and Treatment of a Common Cold.

May 27, Mr. J. Broadbent, Bart., Relation of Arteriosclerosis to Aneurysm and Renal Disease.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

May 24 and 27, Surgical Registrar, Demonstration.

May 28, Medical Registrar, Demonstration.

At 12 noon.

May 24, Dr. Bernstein, Pathological Demonstration.

At 12.15 p.m.

May 25 and 26, Dr. Pritchard, Practical Medicine.

At 5 p.m.

May 24, Mr. Lloyd, Anæsthetics.

May 25, Dr. Saunders, Clinical Lecture.

May 26, Dr. Beddard, Medicine—II.

May 27, Mr. Dunn, Eye Diseases.

May 28, Dr. Abrahams, Skin Diseases.

THE THROAT HOSPITAL, Golden Square, W.
At 5.30 p.m.

May 24, Dr. Powell, Acute Inflammatory Affections of the Middle Ear.

May 27, Dr. Powell, Chronic Purulent Otitis Media.

NATIONAL HOSPITAL FOR THE PARALYSED
AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

May 25, Dr. Batten, Cerebellar Disease.

May 28, Dr. Turner, Epilepsy.

ROYAL SOCIETY OF MEDICINE, 20 Hanover
Square, W.

At 8 p.m.

May 24, Odontological Section (Hon. Secs.: H. W. Trewhy, D. P. Gabell, J. Howard Mummery).

Mr. Warwick James: "A Preliminary Note on the Eruption of the Teeth."

At 5.30 p.m.

May 25, Medical Section (Hon. Secs.: Herbert P. Hawkins, A. M. Gossage).

Professor R. T. Hewlett: "The Treatment of Typhoid Fever with an Anti-endotoxic Serum."

Dr. E. W. Goodall and Dr. Bruce: "The Results of Treatment of Cases of Typhoid Fever with the same Anti-endotoxic serum."

At 4.30 p.m.

May 28, Section for the Study of Disease in Children (Hon. Secs.: Hugh Lett, E. I. Spriggs, Harold J. Stiles).

Dr. Parkes Weber: "Congenital Obliteration of the Bile-ducts with Cirrhosis."

Mr. A. R. Thompson: "Congenital Dislocation of Hip."

At 8.30 p.m.

Section of Anæsthetics (Hon. Secs.: Llewelyn Powell, R. W. Collum).

THE SAVOY BATHS.

THE Savoy Turkish, Russian and Electric Baths, in Savoy Street, Strand, London, W.C., have recently, so we understand, undergone a change of proprietorship and a thorough redecoration and renewal of plant. We can confidently recommend these baths as they stand at the present time to the medical profession and the public. The various rooms are well equipped and decorated, and admirably clean, and the atmosphere is particularly fresh. Patients can safely be sent to them for the ordinary Turkish and Russian baths, which we have personally tried; or for the various forms of medicated and electric baths, the installation of which seemed to us to be all that it should be. The ventilation of the hot rooms of the Turkish bath is exceptionally good, and a visit of ordinary duration is not attended with the headache and lassitude often experienced. The shampooing and the general arrangements of the cooling rooms, etc., impressed us favourably, and the prices are moderate.

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Professor D. LAMBL, of Warsaw, Professor of Clinical Medicine at the University, writes—

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The Hospital

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SATURDAY, MAY 29, 1909.

THE TEACHING OF MEDICINE.

SLOWLY, and almost insensibly, the teaching of medical science has been undergoing revolution for many years. Gradually the ward has claimed more and more of the student's time, and the lecture-room less and less, while the clinical laboratory has also made heavy inroads upon his working hours. How far this decay of the lecture, as it may be called, is due to failure to maintain the old standard of lecturing, and how far to the inherent superiority of bedside training over any other, is not of any great moment; but probably most medical men of the younger generation will agree that the latter is the true explanation, for certainly there are lecturers to-day whose oratory it would be extremely difficult to surpass. The comparative values of the systematic lecture course, the ward clinic, and the study of text-books have often been discussed, and in view of the gradual decline in favour of the former during recent decades, the suggestions put forward by Dr. Byrom Bramwell* for the reform of the teaching system at Edinburgh are worthy of the most careful attention.

It would seem that in the Scottish capital the process of supersession, which has elsewhere overtaken the formal lecture, has made but little headway, and it is with the idea of bringing Edinburgh into line with less conservative schools that a committee of the Pathological Club has asked Dr. Bramwell for his ideas. The latter begins by laying down a series of propositions with which, speaking generally, we are in absolute agreement. He says the only systematic way of acquiring a satisfactory knowledge of medicine is by bedside study; lectures are far less valuable than study in the wards of a hospital. Edinburgh students attend too many lectures each day, and have far too little time for practical clinical work. The examination system in vogue encourages students to concentrate their energies far too much upon theoretical work and upon one subject at a time. This is the sum and substance of the objections urged against the prevailing methods of teaching medicine.

Now these propositions, which Dr. Bramwell evidently regards as incontrovertible, constitute in reality an indictment, not of the Edinburgh medical student, but of his educational authorities. If

examinations are not sufficiently tests of a man's practical ability to diagnose and treat sick patients, the fault is among the examiners or the system under which they work. For Dr. Bramwell does not hesitate to affirm that cramming as opposed to sound clinical knowledge is the result of the present way of conducting the examinations. It is not surprising, therefore, to find among his suggestions the reform and rearrangement of the final examinations. To give students more time for the wards, Dr. Bramwell would reduce the course of systematic medicine lectures from 104 in two terms to 91 spread over the whole academic year, a modification which can scarcely be condemned as too sweeping. Apparently he would like to see a similar modification extended to the teaching of surgery. He would, further, abolish the clinical lectures on medicine (and on surgery), and would institute medical ward clinics five days a week, in the hospital, instead of three, as at present; and he adds some criticisms of the tutorial clinical classes as at present conducted. Yet another suggestion is for the complete separation of gynaecology from clinical medicine and its association with obstetrics in a course to which he would allot 61 lectures annually. This step is also one which will surely commend itself to all but those with whom tradition is all powerful. It has always seemed to us that it is a mistake to rely entirely or mainly on internal examiners for university medical degrees, a tendency which, unless we err, is somewhat noticeable at Edinburgh. Dr. Bramwell does not offer any comments on the advantage of a fair sprinkling of external examiners, but the point is worth his consideration.

Upon the practicability of these alterations in the internal economics of the Edinburgh school we do not presume to speak; but if Dr. Bramwell's views upon the results of the present arrangements are correct, then, in principle, his remarks have our most cordial approbation. In passing it may be said that as Senior Physician to the Royal Infirmary, no less than by his distinguished record as a teacher and as a clinician, anything that Dr. Bramwell has to say on such a matter must be accorded the very weightiest consideration. The reduction in the number of lectures on medicine is not great, but it is

* *Edinburgh Medical Journal*, May, 1909.

at any rate enough to direct attention to the new conception of what a medical student ought to know, and where he ought to learn it. The old "signing-up" system is, in the present greatly altered status of the medical student, an anachronism. At a time when students had too little on their hands to occupy them fully, and in consequence were apt to grow slack in attendance, it was, no doubt, necessary in order to ensure progress that ordinances about the number of lectures to be attended should be enforced. But the detection of the ignoramus and his exclusion from the Medical Register are properly the affair of those who conduct examinations, not of teachers. There have always been, and always will be those who are impatient of lectures, especially if the lecturer be not of the most brilliant; such men get on far more quickly by the help of text-books and ward-work, and to handicap them by the old rules handed down from bygone generations, when text-books were few and poor, is a piece of folly as great as to allow the stolid youth who has slept through some hundreds of lectures credit for professional fitness. The signing-up system, in fact, is out of date, and it is high

time to abolish it. Dr. Bramwell has many other suggestions, which are chiefly elaboration in detail of the broad lines first laid down, and consequently are of interest mainly to members of the Edinburgh school. Perhaps the most instructive is a paragraph dealing with the better distribution of students in the wards, and their limitation to 40 in any one ward—one per bed! If the congestion in the Royal Infirmary is really greater than this, it is hardly to be wondered at that clinical training is difficult to get, or that examiners are in some measure compelled to estimate the theoretical rather than the practical knowledge of those who present themselves for admission to the ranks of the profession. At the same time, it is a most remarkable tribute to the popularity of the Edinburgh school, and it shows that the teaching—even if, as Dr. Bramwell thinks, it is too theoretical—is thorough and attractive as far as it goes. The school is still the chief resort in Britain of colonial students; and in endeavouring to assimilate it to the spirit of the times, Dr. Bramwell and the Pathological Club will carry with them the sincerest well wishes of the medical profession.

UNVALUED PEARLS.

MAJOR RONALD ROSS, in his lecture delivered at the Royal Institution, complained bitterly of the apathy with which attempts to combat malaria are met in certain ague-stricken British Possessions. In proof of the enormous powers of preventing malaria which the later developments of knowledge have placed in our hands he instanced the case of Italy. Here, under the influence of a campaign which includes the distribution of quinine and the provision of mosquito nets, the deaths from malaria have fallen from 21,000 in 1887 to 4,160 in 1907. In contrast with this he referred to a statement, published in 1907, detailing what has been done in 21 of our Colonies. In seven only, Southern Rhodesia, Papua, Mauritius, British Central Africa, Gambia, Ceylon, and Southern Nigeria, is any real interest taken in the business, while in important colonies like Jamaica the authorities responsible for the public health are shewing a most reprehensible lethargy. In Sierra Leone, which Major Ross visited in 1899 in order to institute, with the benefit of local knowledge, an anti-malaria campaign, practically nothing has been done, and so it is in many other parts of the Empire. Major Ross indicts the heads of the sanitary services of the Colonies, and complains that the Colonial Governments are much too lax in the selection of their sanitary officers, passing over men of approved ability and appointing those whose prime credentials are either mediocrity or subservience. The excuse advanced for the pre-

vailing inactivity is want of funds, yet we are told that "many a town could be kept clear of malaria for the amount, say, of the salary of a single European official." If this be true the plea cannot be accepted, for the provision of healthy conditions of life is not the least of the duties incumbent upon a Government. Altogether Major Ross's address does not suggest a satisfactory state of affairs, and it is to be hoped that his strictures will find attention in the appropriate quarter. It is possible that in his anxiety to reach the fruition of knowledge the speaker has been goaded into stronger language than the occasion demands or the weakness of humanity justifies. We sympathise with him. Nothing is more exasperating than the effort to benefit people who refuse to be benefited, for no task is more thankless. Anyone who has been unwillingly forced into responsibility for a friend who has dined too generously will realise how maddening a thing it is to feel bound in honour to urge reasonable behaviour and yet to receive nothing but jibes in return. The natural indignation which attends such a position—and Major Ross occupies an analogous one towards the recalcitrant colonial health departments—makes warmth of language very venial. But if the charges brought by Major Ross are justified, no time should be lost in bringing all available pressure to bear upon those who in this matter are shirking their elementary obligations.

ANNOTATIONS.

The Late Mr. Meredith.

WITH the death of Mr. Meredith there has departed a great writer and thinker for whom medical men have distinct cause to feel regard. As has been widely reported, one of the last acts of his life was to send support to a hospital for incurables, coupled with wise words of commendation. But thoughtful members of the medical profession have long owed a debt of gratitude to the author of *Beauchamp's Career*. In drawing the character of Beauchamp's counsellor he has shown, as Shelley began to do in *Prince Athanase*, the outlook on life and affairs—joined to high capacity—which seems to be produced by the combination of temperament for, and practice of, the scientific profession of medicine, or at any rate is often found along with it. This study bulks large in the book; and although an artist of Mr. Meredith's calibre creates, and does not copy, yet quite possibly the picture of the physician of philosophical and political wisdom may owe something to the personality of the late Dr. Bridges. It is all the more impressive because the opposed (in fact, bitterly and violently opposed) type of mind is also represented. Unfortunately, for every reader of *Beauchamp's Career* there are a hundred in the audience of fashionable, ephemeral authors whose chief use of the medical man as a serious character of fiction has been to mark petty class distinctions and gratify reactionary prejudices, although it is to be remarked that this propensity grows much less noticeable in their later works. Whether it is the moderation of advancing years, or the permeation of Meredithian influence, or the strong forward march of medicine, which has caused this little literary habit of sneering at the doctor to be dropped, is not our province to inquire.

Medical Defence.

WE drew attention last year (*THE HOSPITAL*, June 27, 1908, p. 335) to a new principle in that form of insurance which is afforded by medical defence societies, whereby members of the profession can acquire indemnity not only for their own costs in actions brought against them in their professional capacity, but also for damages assessed against them and taxed costs of the other side in connection therewith. At that time the junior of the English defence societies—the London and Counties Medical Protection Society—was about to adopt this form of additional insurance, and ultimately did so. The Council of the Medical Defence Union at that time hesitated to follow suit, apparently from an apprehension that against members thus insured the imputation of negligence would be freely levelled in courts of law. It was pointed out, however, in these pages last year that no practitioner in his senses would really allow himself to become slack or negligent simply because he might be protected against financial loss, which is probably the least serious part of the troubles of defending actions brought for these reasons. At any rate, the Defence Union has now abandoned the objections entertained when the London and Counties led the way, and has now concluded arrangements with a well-known insurance company by which members whose subscriptions are paid can be indemnified against adverse verdicts and costs: an annual premium of 7s. 6d. covers damages up to £2,000,

and one of 9s. protects up to £2,500. A number of stipulations about the conduct of actions and appeals are added, which seem perfectly reasonable. The extent to which the profession takes advantage of it, and the results of its working, will, no doubt, be followed with keen interest by the medical world.

The Medical Profession in India.

IT has always been one of the most attractive features of the Indian Medical Service, into which so many of the flower of our young and newly qualified medical men are admitted, that after a period of some five years in regimental employ (that is as medical officer in charge of troops), a large number of important and well-paid civilian appointments are open to the members of the Service. Furthermore, even those who elect to remain on the strictly military side of the establishment are allowed to supplement their official salaries by private practice, provided this does not interfere with any of their regular duties. It appears, however, from a Parliamentary paper (Cd. 4666) published this week, that Lord Morley has come to the conclusion that no further extension of the civil side of the Indian Medical Service can be allowed. A strong effort must be made to reduce the latter by gradually extending the employment of civil medical practitioners recruited in India: that is, in other words, by native Indians. The Government of India point out that one of the prime essentials of their medical service is that it must always be strong enough to meet the requirements of the Indian Army; and it must, therefore, obviously contain more officers than are sufficient to discharge the ordinary work of that army during peace. By throwing open a large number of civilian posts to their military medical officers, the Indian Government not only secures for itself such a reserve, but insures also that it is composed of officers highly efficient in a professional respect. Of recent years the two disturbing factors which Lord Morley seems to have taken into account are the extension of the Indian medical schools, in which rapidly increasing numbers of native Indians are being qualified, and the desire excited among educated Indians to participate in the Crown Services of their country more than they have hitherto been allowed to do. From the medical point of view the teaching of medicine in India is a step that must be applauded with enthusiasm; it will be generations before sufficient practitioners can be provided adequately to provide for the needs of the population. From a sociological view it is to be remarked that quite a fair proportion of those who nowadays gain entrance to the Indian Medical Service by competitive examination are native Indians; and that it would be a great pity to relax a system which has produced such a splendid medical service as that which the Indian Army now enjoys. There seems to be some conflict of opinion between Lord Morley and the Indian Government precisely how far the process of supersession of Europeans by natives is to go; at least, there are marked discrepancies between the ideal laid down in the despatches between these two authorities which are published in the Parliamentary question.

MEDICAL OPINION AND MOVEMENT.

RAYMOND, in *La Revue d'Obstétrique et de Gynécologie*, advises that in all cases of Acute Puerperal Infection in which there is evidence that the bacterial invasion has spread beyond the uterine walls, the operation of posterior colpotomy should be performed. The technique is simple, the operation itself is slight, and it may be undertaken very early in the disease. Both vaginal hysterectomy and laparotomy are dangerous when the infection is grave, because of the shock which their performance entails. Colpotomy is also useful at the outset in cases of acute pelvic peritonitis, since it is always possible at a later period to resort to more drastic measures. In many cases the operation brings to light peritoneal collections which were unsuspected clinically. Where there is perforation of the puerperal uterus, and more especially when the lesion is on its posterior surface, colpotomy allows of evacuation of the septic fluids and thus prevents general infection. It is often successful in cases in which the infection leads to no peritoneal effusion, and the author considers it absolutely necessary when abscesses are present in Douglas' pouch and the broad ligament. Peri-uterine phlebitis with abscesses should be treated by colpotomy, and it is possible in some cases to remove thrombosed veins by this route. When, however, the collections of pus are large, and there is risk of extension to the general cavity, the operation by itself is not sufficient, but should be combined with drainage through the abdominal wall.

ONE THOUSAND cases of Serious Head Injury personally observed is a very large number; such a series is analysed by Dr. Charles Phelps in the *Annals of Surgery*. The first point he deals with is the percentage of recoveries, which, though larger than might be expected from some of the statements in text-books, is about what any surgeon of experience would expect to find. Out of 570 cases of fracture of the cranial base there were 259 recoveries, or 45.4 per cent.; out of 213 of fracture of the cranial vault there were 152 recoveries; and out of 217 of independent injury, in which no evidence of fracture could be found (though doubtless many fractures were in fact present), there were 130 recoveries. Another conclusion reached is that hæmorrhage from the ear after head injury, unless it can be proved to come from a lesion of the meatus itself, always means fracture of the petrous bone, whether the tympanum has or has not been damaged: it is impossible for concussion or other violence to rupture the tympanum without also fracturing the temporal bone. In 90 cases the only exception to this was in the case of a gunshot wound at close range. Linear fracture practically always unites by callus: displacement is extremely rare, but does occur. A definite loss of osseous substance, as by the complete removal of a detached fragment, is replaced by a dense fibrous structure composed of the thickened and consolidated dura mater and periosteum. The prognosis of a depressed fragment depends on treatment: with early elevation it is very good. The only danger due to

fracture itself, as distinguished from concomitant brain injury, is that of laceration of vessels or of cerebral tissue.

AS regards treatment, Dr. Phelps formulates a procedure which has, he believes, been justified in his practice, as well as by theoretical considerations. During the continuance of shock no local interference is permitted except for hæmorrhage or for the aseptic protection of a compound fracture. As soon as practicable after reaction begins, examination, and if necessary thorough exploration for fracture, are made. If any suspicion of fracture exists, exploratory incision is performed even in the absence of symptoms of cerebral lesion. A fine fissure is neglected, but an open one entails further exploration for comminution or depressed inner table. Punctured fractures are explored when attended by symptoms. All depressed or comminuted fragments are carefully elevated, but nothing is removed unless it has no dural or periosteal attachment worth considering. Trephines are avoided whenever it is feasible to manage with chisel, drill, or rongeur alone. Direct fractures of the base, and the basal continuations of fractures of the vault rarely admit interference; exceptions admitted are in orbital and ethmoid fractures, due to direct violence. The antiseptic treatment of a ruptured tympanum and petrous portion is regarded as excellent theoretically, but seemingly not as of any great practical moment. When Dr. Phelps comes to the consideration of the after results in those 541 patients who recovered, it may be anticipated that he will have some even more interesting conclusions to publish.

TWO very vexed questions in the Early Treatment of Appendicitis are discussed by Mr. A. E. Maylard in the *Practitioner*. These two conundrums have divided the profession ever since the recognition of appendicitis became general near the end of the last century, and its operative treatment was admitted and discussed. Mr. Maylard puts them thus: Should aperients or sedatives be administered in the early stages of the attack? and Should heat or cold be applied locally? These two queries he discusses (apart altogether from questions of operation) in their theoretical and practical aspects. To the first he answers that he would allow $\frac{1}{2}$ grain of morphia for pain solely, and would commence at once the administration of drachm doses of sulphate of magnesia every hour until the bowels move. As to the second he prefers hot fomentations to ice-bags, applied to the iliac region. The author recognises that theory takes a more prominent place than facts in the details of his discussion of the problem, a position to a large degree unavoidable in our ignorance of the exact processes at work in any particular case, and of the influences exercised by any particular agent. Probably very many surgeons would disagree with his opinions, especially the first one; but these divergences of teaching serve to emphasise the protean character of the disease and the fact that finality is by no means yet reached about its correct treatment.

THE claims of treatment, if this term is taken to include general management and control, as well as more active obstetrical measures, are usually so insistent in midwifery work, that the hard-pressed general practitioner is often tempted to scamp his routine determination of the exact fetal presentation, etc. Indeed, there are country practitioners of considerable skill and great experience and success in practical obstetrics who habitually neglect the precise academical diagnosis so much beloved of examiners and teachers, and who yet seem to get along very well without it. Nevertheless they are bad examples to the young practitioner, for their violation of one of the canons of the art is often more apparent than real, diagnosis with them being rapid and intuitive; in any case their success is obtained at a cost, and would be greater and of a higher type if their knowledge of the conditions under their eyes were more precise and self-conscious. Therefore it is not time wasted upon mere academic refinements for the practitioner to make a note of the simple and practical method described by Kocks for the diagnosis of the foetal lie in Shoulder Presentations. One arm is drawn down and the hand pulled out of the vagina. The limb is then placed in a position of extreme supination—i.e. with the thumb as near as possible to the back of the hand. The thumb then points to the side of the mother on which the child's head lies, the back of the hand corresponding to the back of the foetus. If the back of the hand is in front the back of the foetus is anterior, and the presentation is occipito-anterior; if the back of the hand is behind the back of the foetus is posterior, and the presentation is occipito-posterior. If the thumb points to the mother's right, the head lies to the right; if to the mother's left, the head lies to the left. When the diagnosis has been made, the limb is returned to the uterus and version performed.

IN such affections as Chlorosis, Early Tuberculosis, etc., the patient's anæmia and her diminished resistance to the disease are often increased by over-frequent menstruation. With the idea of checking this most debilitating symptom Wilczinski, of Zakopane, has tried the effect of the administration of lecithin in doses of 0.1 to 0.2 gram three times a day, commencing immediately on the cessation of a period. The author has been able by its use to delay the appearance of the flow for a week on two consecutive occasions in the same patient, who, at the outset of this treatment, fifteen months ago, menstruated twice a month. On the third occasion an interval of four weeks occurred, and since then the patient has continued to menstruate with intervals of four weeks. Equal success attended the case of a woman who, though regular, suffered from excessive hæmorrhage at the periods. Here, under lecithin, the period was twice delayed for two weeks. Out of 21 patients so treated eight were much improved, one failed to react to treatment, and the remaining 12, though improved, have not been under treatment sufficiently long to judge of its results. The author points out the necessity of persevering with the drug for a long time during inter-menstrual periods. A prolonged course of lecithin presents no dangers to the patient.

DR. C. F. HEERFORDT, of Copenhagen, gives an account of three cases he has observed within the past few months of a condition which appeared in many respects to suggest an atypical form of Mumps. But, on the other hand, these cases took such an unusual clinical course that he is induced to regard the condition as a separate, unknown morbid entity. The patients were 11, 14, and 27 years of age respectively. The malady commenced with prodromata—anorexia, epistaxis, and malaise—which lasted from 14 days in one case to three months in another. Then followed the development of the characteristic symptoms—namely, fever, irido-cyclitis, enlargement of the parotid glands, and paresis of the cerebro-spinal nerves. In one case the symptoms developed almost simultaneously, in the second case the disease commenced with a bilateral irido-cyclitis and optic neuritis, and the parotitis developed three weeks later. The third case started with the swelling of the parotid gland, ocular troubles appearing about a month later, to be followed three months later by troubles in deglutition and speech, and paræsthesia of the left side. The peculiar characteristic of this condition, as distinguished from mumps, is the slow subchronic development of the disease, extending in one case over several months. Dr. Heerfordt would distinguish it by the name of sub-chronic uveo-parotidian fever. He finds in medical literature two cases recorded of an unusual form of mumps which appear closely similar to these cases observed by himself. One was reported by Dr. P. Daireaux, of Paris, in 1899, and the other by Dr. A. Collomb, of Geneva, in 1903. In these cases the parotitis was associated with irido-cyclitis and facial paralysis, and the course of the disease appears to have been prolonged over several weeks.

FLUORESCENT substances (such as fluorescein, eosin, acridin, and scarlet red) have been known to exercise under the influence of sunlight a bactericidal effect. Von Toppeiner has reduced the power of diphtheria toxin by exposure to eosin and sunlight, and he has obtained good results by applying it to parasitic affections of the skin and afterwards exposing the parts to sunlight. Noguchi has obtained similar experimental results with animals. More recently Drs. V. and W. Pleth, of Guadálajara, Mexico, have obtained good effects by treating artificially-produced ulcerations in animals with a 5 to 10 per cent. aqueous solution of eosin and with scarlet red suspended in olive oil or vaseline, and exposing to sunlight. The animals treated with eosin recovered rapidly, while some of the control animals even died from the infected wounds. These favourable results led to the adoption of the treatment in all manners of lesions in the human subject, and a report of their work appears in the *American Journal of Surgery*. The authors have used the treatment in cases of suppurating wounds, infected joints, eczema, actinomycosis, endometritis, and other conditions. They have frequently used the two substances alternately, painting the part one day with eosin and the next applying the scarlet red suspended in oil or vaseline, and they are much impressed with the rapidity of healing under this method of treatment. The chief drawback is the staining of the clothes.

DR. G. POCHOU makes some interesting observations in the *Journal de Médecine* on Mammary and Ovarian Opothrapy and the antagonism between the secretions of the mammary and ovarian glands. The author cites several cases of severe hæmorrhage at the menstrual periods, which he has been able to control successfully by the administration of mammary gland in cachets. Even in cases in which the presence of a small fibroid is a causal factor, chiefly, he thinks, by the general uterine congestion which it produces, considerable relief is obtained by the administration of mammary gland. He finds, moreover, that the administration of the gland often causes a swelling and activity of the breasts, and may cause a return of proper lactation in cases in which a diminution of milk secretion is attributable to a return of the menstrual periods. On the other hand, the author reports several cases in which suppression of the menses has been accompanied by swelling and tenderness of the breasts, and in such cases the administration of ovarian gland has effected a return of the menstrual periods, together with a reduction of the breasts to normal conditions. These cases afford not only a therapeutic interest, but also suggest a physiological antagonism between the mammary and ovarian glands. The author points out that this antagonism may assert itself especially at the menopause, when a deficient ovarian activity may result in a congestion of the breasts, and he suggests that this congestion may favour the development of neoplasms, which make their appearance especially at this age. Velpeau has drawn attention to the fact that adenoid tumours of the breast are frequently associated with irregularity of the menstrual functions.

DURING the past year considerable attention was devoted to the danger of Typhoid Bacilli Carriers, and on several occasions, especially in asylums and like institutions, continued outbreaks of the disease have been traced to this source. They are discovered by a careful bacteriological examination of the fæces, and it has been almost conclusively shown that the gall-bladder forms the habitat of the bacilli, from which they are extruded into the intestinal tract, and so arrive in the fæces. Even careful examination of the fæces, however, unless constantly repeated, may fail to discover the presence of the bacilli, as they may only be eliminated at intervals. According to Jurgens and Forster, they often exist in large quantities in the upper portion of the intestinal tract, but steadily diminish in their course downwards. Weber, therefore, has conceived the idea of causing a reflex of bile into the stomach in suspected cases, according to the method of Volhard, and examining the bilious gastric content for the presence of the bacillus of Eberth. The patient is given 200 c.c. of olive oil, and half an hour afterwards the gastric content is drawn off. This consists of a liquid which separates into two layers—an aqueous below, which is coloured with bile, and an oily layer which floats on the top. It is in the oily layer that the bacilli are discovered. In this way the typhoid bacilli have been detected in the gastric content in enormous quantities

in cases in which the fæces only showed them in sparse colonies. Moreover, these micro-organisms may be identified in the gastric content after an interval of two days, so that the fluid can be sent to a laboratory at a distance for examination. It is not always easy to obtain a reflex of bile into the stomach, but even when the gastric content is only slightly coloured with bile a positive result is said to be obtained in cases of "typhoid carriers."

QUINTARD, in a report on two cases of Tubercular Stenosis of the Ileum, lays stress on the difficulty in correctly diagnosing this condition. "The majority of cases," he remarks, "where one really does not know anything definite about the diagnosis, and where carcinoma and bands can be excluded, prove to be of tubercular origin." In the two cases reported there was a definite history of, recurrent abdominal pain, which in one was accompanied with marked visible peristalsis. The pain and discomfort follow the intake of solid food, and very little aid is obtainable from an inspection of the fæces. The condition appears to be commoner in young adult patients than in any other class. A most important detail, from the practitioner's point of view is, of course, the question of treatment. In the discussion which followed the reading of Dr. Quintard's paper at the New York Post-graduate Clinical Society, Erdmann advocated surgical interference in all suitable cases, and thought a lateral anastomosis with resection of the piece of intestine implicated was the most satisfactory method of dealing with the obstruction. The cases he had operated upon have not shown him that there is any validity in the objection that the end pockets, after resection, may become filled up and give rise to secondary trouble after a lateral anastomosis has been performed. Lloyd, again, advised an end to end anastomosis into the ascending colon. In all cases where external signs are wanting the diagnosis presents great difficulties, and where extensive tracts of bowel and mesentery are affected, surgical treatment does not often effect a cure.

AT the last meeting of the Société de Médecine D'Alger, Vincent showed an Enormous Spleen, which had been removed by resection from a patient who for eighteen months had suffered from what were looked upon as severe abdominal crises. Four years before the operation the patient began to feel vague aches in the left hypochondriac region. These "douleurs vagues" Vincent considered as the first phase in a case of extreme mobility leading on to final torsion. Later on these vague pains were followed by definite signs of displacement of the organ, which could now be felt lying in the right iliac fossa. Finally an acute crisis supervened, accompanied with much vomiting, slight fever, and signs of strangulation. The operation showed that the pedicle was enormously swollen, the veins thrombosed, and that there were areas of thrombosis and incipient gangrene in the gastro-splenic omentum. Notwithstanding this grave complication the patient made a good recovery.

HOSPITAL CLINICS.

SOME UNUSUAL FEATURES OF LEAD POISONING.

By Sir THOMAS OLIVER, M.D., LL.D., D.Sc., F.R.C.P.; Physician to the Royal Victoria Infirmary, and Professor of Physiology in the College of Medicine, Newcastle-upon-Tyne.

(A Lecture Delivered at The Polyclinic, May 19, 1909.)

ALTHOUGH an old subject lead poisoning still offers many points for consideration. It may, therefore, not be a waste of time to-day if we discuss together some of the direct and indirect issues which plumbism raises. Notwithstanding all that the Home Office has accomplished and the saving of human life and suffering which its regulations have effected, there is yet an amount of industrial lead poisoning which is a source of anxiety to the legislature and a

every medical practitioner towards the subject of industrial lead poisoning, each case requiring careful consideration, for while it is unwise to regard all trifling symptoms in workmen as the consequences of their occupation, it is equally a misfortune to overlook plumbism when present. Within recent years, since the abolition of female labour in lead works, the cases of plumbism which have come under my care have been of a less acute character and have

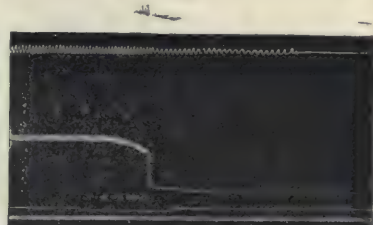
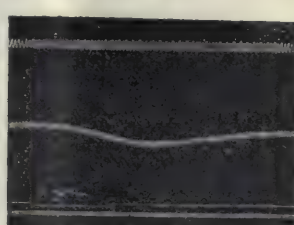
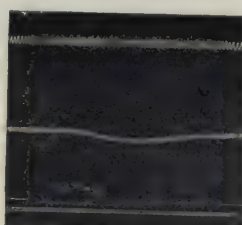
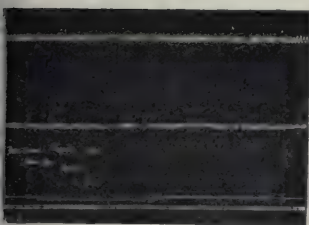
FIG. 1.—FOX TERRIER (Puppy—Male).
(Ether.)

(a)

(b)

(c)

(d)



5 c.c. Aq. Dest.

5 c.c. 1 per cent. PbN_2O_3

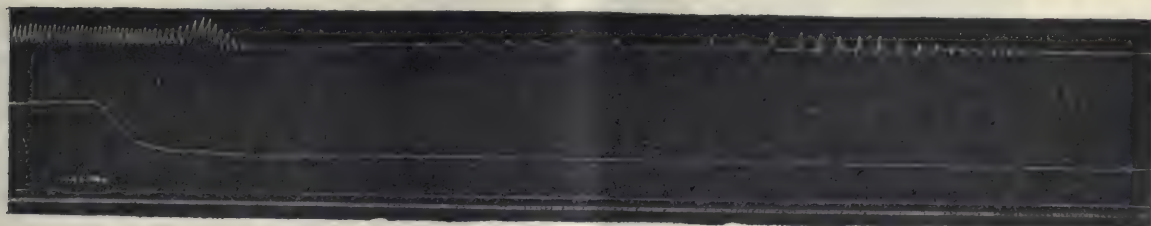
5 c.c. 5 per cent. PbN_2O_3

5 c.c. 10 per cent. PbN_2O_3

disappointment to employers. With the march of civilisation new industries in which lead is used are continually developing, new methods of manufacture are constantly being introduced whereby fresh sources of plumbism arise. At their inception these industries are usually carried on with care that no illness occurs. Later on, as the older workmen become replaced by less experienced hands, all at once, or gradually, symptoms of saturnine poisoning appear. The operation of the Workmen's Compensation Act has given a fresh impetus to the

taken a longer time to recover. To some extent lead poisoning differs in different trades. While in the main one of daily dosage and rapidity of absorption, there also enter into its causation such circumstances as fatigue, nutrition, respiration by the mouth, indulgence in alcohol, and alternation of employment. Workers in some trades suffer mostly from gastrointestinal disorders, while in others nervous, kidney, and cardio-vascular derangements predominate. To some physicians it is a debatable point as to whether there is any difference in plumbism produced rapidly

FIG. 2.—FOX TERRIER (Male).
(Ether-Chloroform.)



5 c.c. 10 per cent. PbN_2O_3

subject of lead poisoning, for additional responsibilities have been imposed upon members of the medical profession. With plumbism as with appendicitis, there is a tendency for the number of cases to increase as public and professional attention is directed to it. Even with lead workers it is scarcely proper to attribute all their ailments to lead. These may be due to other causes, such as deranged digestion, the results of alcohol and improper feeding. An open mind ought to be the attitude of

and slowly. My own feeling is that the worst cases, generally speaking, are those where the poison has entered imperceptibly and been absorbed slowly over a long period in extremely minute quantities. I have said generally, so as to exclude acute saturnine encephalopathy, which is admittedly one of the most serious forms of lead poisoning. Under the other circumstances to which I have alluded the effects of lead are cumulative, the structural changes which are slowly produced are permanent, and under

treatment elimination is tardy. The excretion of lead is always slower than its absorption, hence the tendency for the poison to accumulate in the system. To the part played by leucocytes in the absorption, transference, retention, and elimination of lead we will later on refer.

The proneness of certain families and individuals to infectious diseases is common knowledge. A similar idiosyncrasy is observable in lead poisoning. Some persons are more readily brought under the influence of lead than others. Of young persons and especially females is this particularly true. It is because lead rapidly affects the blood-making organs of the body that anæmic subjects do not bear exposure to it. Still, this is only one factor. I have seen a young female lead worker die from acute saturnine encephalopathy after two months' work in a white lead factory, and, on the other hand, I have seen a strong, healthy joiner out of work suffer from agonising colic after three months casual labour in a red lead factory. Behind apparent health there are often idiosyncrasy and the predisposing effects of poverty to be dealt with. As an illustration of idiosyncrasy, I have seen a whole family of sons die from lead poisoning. We are familiar with this aspect of the subject, namely, diminished resistance to lead, but we do not hear so much of a resistance to it. This, like its opposite, is often a family trait. One of my infirmary patients, a man aged 45, commenced work in the smelting department of a lead works thirty years ago; for the last twenty-three years he has been in the red lead department. Until December of last year his work has never been interrupted by illness. His father is an old man of 80, who worked for forty-four years as a red lead maker, and never suffered. The patient has three brothers who have worked for several years in lead, and not one of them has suffered from plumbism. I have seen similar resistance to lead exhibited by animals. In going through a lead factory it is not uncommon to find one or two old workers who have never been ill, but the immunity is not absolute, for it only requires the development of an intercurrent malady such as influenza, the receipt of an injury, or a more than usual indulgence in alcohol, for severe symptoms of plumbism to arise. Under these circumstances the resistance of the individual becomes changed, or the constitution of his blood and fluids becomes altered, whereby lead long lying dormant in an insoluble form in the tissues is re-dissolved, circulates in the blood, and sets up lead poisoning. It is difficult to say how long lead can remain in the body without causing symptoms. Two cases bearing upon this point have recently come under my notice. (1) A married woman, aged 36, was admitted into the infirmary suffering from severe headache, paralysis of the muscles of one eye-ball, and defective eyesight. She was the mother of seven children, six of whom were alive and healthy. There was a history of three miscarriages—probably the result of her occupation as a white lead worker—before her marriage. I recognised this woman as an old patient whom I had treated seventeen years previously for encephalopathy, followed by blindness, from which she had made a good recovery. Several months

after leaving the infirmary on that occasion she married, and since then neither she nor her husband has been brought into contact with lead. As there was a complete absence of syphilis and of any local condition to explain the headache and paralysis, it seemed to me that the symptoms might be due to lead. Accordingly I sent a sample of urine to the Chemical Laboratory, Armstrong College, and Professor Bedson reported the presence of lead in the urine. Under treatment by pot. iodide and magnesium sulphate patient got well again. In this patient, after seventeen years of excellent health following an apparent recovery from acute lead poisoning, during which the trials of maternity were many and were well borne and without any fresh infection having taken place, symptoms of an obscure malady developed, due apparently to a re-solution of lead compounds, which for years had been stored up in the tissues; otherwise how can be explained the presence of lead in the urine? (2) Another case pointing to the slow elimination of the poison is that of a lead mine manager, in whom, although no fresh infection has taken place for four years, and pounds of potassium iodide have been swallowed, lead is present in the urine. The presence of lead in the urine is pretty conclusive evidence of plumbism. It explains the obscure symptoms seen in a few patients who give no history of plumbism or who are known to have suffered from lead poisoning years previously and recovered, and it shows the necessity for the cautious administration of potassium iodide, since this floods the blood with soluble lead salts, which may not only aggravate symptoms, but cause death.

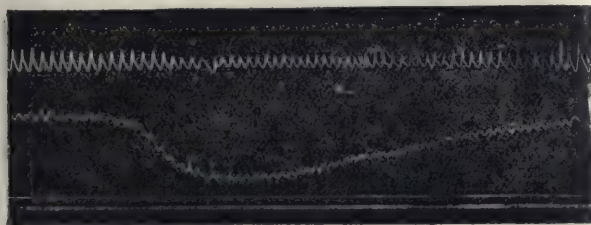
Allusion has been made to the influence of sex in the causation of plumbism. The abolition of female labour in the dangerous processes of a lead factory has already saved thousands of lives. Young women not only become readier victims of lead poisoning than men, they are besides more prone to its serious forms. If pregnant a large number of them miscarry; if term is reached the children are born dead or die soon after birth in convulsions. The only way by which pregnancy can be ended successfully is by getting expecting mothers to retire from lead works during pregnancy. I am of the opinion that no woman should work after the fourth month of pregnancy in any process in which lead is used. Lead not only affects injuriously the pregnant woman herself, but also her offspring, for the poison passes into the placenta, and through it into the foetus, destroying its life, or causing abortion by the purely ecboic action of lead upon uterine muscular fibre. Prof. Bedson found lead in the internal organs of stillborn children of female lead workers which I had sent to him; also in several foetal rabbits, to the mothers of which I had administered lead.

My own experience of the greater predisposition of women than men to plumbism is confirmed by such writers as Constantin Paul in France, whose statistics are most convincing; Sommerfeld, of Berlin; Teleky, of Vienna; and others. Dr. Ignace Kauf*, dealing with type-founders in Austria, male

* "Rapport présenté sur les Intoxications du Plomb. Au Congrès de l'Association Internationale pour la Protection Légale des Travailleurs tenu à Bâle en 1904."

and female, also states that females suffer more from plumbism than males. While from 3.6 to 11.7 per cent. male type-founders become ill, the number of females is from 13.1 to 45 per cent. One-half, or rather 52.4 per cent. of female type-founders when pregnant miscarry, while of those engaged in typographic printing 10 per cent. only miscarry. This shows the varying influence of occupation. Kauf is of the opinion that women working under the same conditions as men suffer more frequently than men and that their illness is of longer duration. Teleky, of Vienna, found in a factory where lead capsules

FIG. 3 (a).—COLLIE BITCH.—Jan. 5.



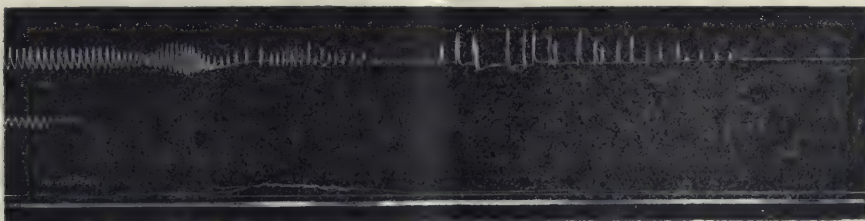
5 c.c. 10 per cent. PbN_2O .

are made for bottles that of the women who are brushers off and who are therefore exposed to lead 44.1 per cent. miscarry when pregnant, while of the women engaged in other departments in the factory and not exposed to lead only 15.5 per cent. miscarry. It is unfair to attribute all the miscarriages in female lead workers to plumbism—other causes are doubtless in operation, such as the use of drugs and alcohol, syphilis, and the action of the gonococcus, but the operation of these is not limited to one particular section of society or to women employed in one department of an industry.

An early sign of lead poisoning, even sometimes before colic, is anæmia. In chronic cases anæmia

tional diminution of the hæmoglobin. It is a simple anæmia, with little or no alteration in the number of white corpuscles, although in one of my female patients, aged 39, a maker-up of blue leads in a lead factory, there was a distinct leucocytosis, the white corpuscles numbering 15,625 and the red 4,316,660 per cmm. of blood. Grawitz drew attention to the presence in plumbism of red corpuscles which had undergone basophile degeneration, with here and there a nucleated red corpuscle. These changes I have occasionally found in the erythrocytes of lead workers in Newcastle, but it is only very few of the corpuscles that are thus affected, and not with the frequency to which other writers have drawn attention. Since these alterations along with poikilocytosis and a varying size of the corpuscles only occur in the older standing cases where anæmia is well developed, and are also met with in other forms of poisoning and debilitating forms of illness unassociated with plumbism, we cannot regard them as pathognomonic of lead poisoning. Dr. Glibert, Principal Medical Inspector to the Belgian Government*, has carried out a series of experiments upon animals to show the effects of lead upon the blood. He finds that some animals are much more rapidly brought under the influence of lead than others, a circumstance which my own experiments confirm. Dr. Glibert finds that when the percentage of hæmoglobin is slowly reduced the resistance of the animal to lead is always greater, and that if the dosage of lead is interrupted the blood tends to recover itself; a circumstance which goes strongly to support the preventive line of treatment I have long advocated, namely, alternative employment of lead workers. While in Glibert's experiments with lead the coloured corpuscles diminished in numbers, this and the fall in the hæmoglobin percentage, although usually running concurrently, were not always observed. A rise in the amount of hæmoglobin is

FIG. 3 (b).—COLLIE BITCH.—Jan. 5.



10 c.c. 10 per cent. PbN_2O .

is almost always present. It is frequently accompanied by an earthy or subicteric tinge of the skin. In one of my male patients, J. H., aged 40, the red cells were 1,866,660 per c.mm. of blood; in a red lead worker, C. M., who presented no blue line on the gums, but was suffering from paresis of the right wrist with tender supinator longus, and in whose urine Professor Bedson found lead, the red corpuscles numbered 2,916,667 per c.mm. of blood, the white corpuscles 3,902, and the hæmoglobin was 70 per cent.; in an amalgam separator, W. C. C., the red corpuscles were 2,500,000, the white cells 6,000, and hæmoglobin 50 per cent. It would seem, therefore, that in lead poisoning the blood becomes poor in red corpuscles, and with this there is a propor-

not always accompanied by an increase in the number of red corpuscles. Glibert found not a leucopænia, but rather a slight leucocytosis in several of the guinea-pigs fed with lead.

As it is not my intention to give a detailed symptomatology of lead poisoning, I will set aside colic and the blue line on the gums, merely mentioning that Burton's line occurs at the margin of the gum close to the teeth, and that it is due to the phagocytes in the deeper tissues taking up lead particles in the form of sulphide. Occasionally blue patches the size of a sixpence are seen inside the lips or cheeks

* "Le Saturnisme Expérimental. Extrait des Rapports Annuels de l'Inspection du Travail en 1906."

opposite a decayed tooth. Similar patches may be present in the intestinal tract. As regards colic, Teleky notes a type of hysterical lead colic in young nervous subjects, the peculiar features of which are its long duration and its curability by cold water and electricity.

Loss of vision in lead poisoning occurs under three different conditions. (1) It may be purely toxic and therefore central without any ophthalmoscopic evidence; (2) it may be due to acute neuro-retinitis, with hæmorrhages in severe cases; or (3) associated with and due to vascular changes in the retina dependent upon kidney disease. Very pronounced structural alterations can occur in the retina without albumen in the urine. In a male patient seen in consultation by Dr. Cree of Newcastle and myself, who for four years previously had been little if at all brought into contact with lead, and whose appearance was that of a healthy man, there had occurred a gradual loss of sight. The complaint amounted to an almost complete loss of vision in the lower field of each eye. The loss of vision had taken place without headache, but it had been preceded by colicky pains, which had continued off and on for a few months. There was no blue line on the gums and no paresis or paralysis of muscle. On examining the eyes, Dr. Cree found the right disc extremely pale, except the part internal to the main vessels; the outline perfectly sharp, arteries distinctly narrowed, the veins normal—not tortuous, and no evidence of exudation. In the left eye part of the disc internal to the main vessels was paler than that of the right eye, the arteries seemed narrower in outline and were sharp. In both eyes the vessels encroached upon the macula more than normally. A small cluster of minute hæmorrhages was also observed in the left retina below the disc. By a process of exclusion the various ophthalmologists and physicians who saw this patient came to regard the optic neuritis with commencing atrophy as the consequence of lead. His urine was found to contain lead.

In other lectures I have drawn attention to an irregularity of the pupils, inequality of the radial pulses, unequal severity of pain on pressing one-half of the abdomen compared with the other, and with this pretty severe pain on pressing the vagi in their course in the neck, always worse on the same side as the more painful half of the abdomen. These are frequently to be met with in cases of lead colic, where the pain lingers for several days. One pupil is larger than the other, the tension of one radial artery is higher than the other. As a rule the smaller pupil and the more tense radial artery are on the same side as the pain in the abdomen on firm pressure. While this irregularity of the pupils is observed in the early stages of lead poisoning, and is indirectly the result of the colic, it may also be met with in the more chronic forms in which, in addition to paralysis or paresis of the muscles of the hands and arms and drooping eyelids, there are tremors of the facial muscles and of the protruded tongue, a hilarity of manner and a slowness of speech which recall the saturnine pseudo-general paralysis of French authors, and which under treatment is capable of

considerable improvement. Convulsions may occur in the subjects of lead paralysis, whose urine contains no albumen. In a locomotive engine painter, aged 28, the illness began with convulsions followed by loss of consciousness for 3 days. When the coma passed away the right arm and leg were found to be paralysed, and this lasted 3 weeks. There was no albumen in the urine; the amount of urea passed daily was only 130 grains. The presence of a blue line on the gums suggested the diagnosis, which the detection of lead in the urine confirmed. There was marked anæmia, only 2,500,000 red corpuscles per c.mm. of blood and 35 per cent. of hæmoglobin, and yet, notwithstanding this marked alteration of the blood, none of the red corpuscles exhibited basophile degeneration.

With the common affection known as "wrist-drop" in lead poisoning we are all more or less familiar. Although known to ancient writers, it was Boerhaave who in 1656 reported the occurrence of paralysis in workmen handling lead. Since then of the many contributors to our knowledge of the subject it is to Tancquerel des Planches and Duchenne, of Boulogne, that we are mainly indebted. Making use of electricity, Duchenne studied the seat of the paralysis, showed the order in which the muscles became affected, drew attention to paralysis of the short abductors of the thumb, also to a generalised form of saturnine paralysis, and indicated how this might be distinguished from subacute anterior poliomyelitis. Certain types of paralysis have been described. In wrist-drop the common extensors of fingers, and the extensors of forefinger, phalanges of thumb and wrist are affected. The supinator longus, although supplied by the same nerve, escapes. It was Remak who first described in detail the "upper arm" type in which the deltoid, biceps, brachialis anticus and supinator longus are affected, also the "leg" type in which the peroneal muscles and the common and proper extensors of the big toe are involved. In what is known as the Aran-Duchenne type, first described by Mœbius, the small muscles of the hands become affected so as to simulate progressive muscular atrophy. To these may be added the generalised form of paralysis already mentioned, in which the patient lies on his back, unable to move arms, legs, and trunk, and in which there is danger to life from implication of the respiratory muscles. There are also irregular forms of paralysis. The levator palpebræ may be affected so that the eyelid droops, the muscles of the eyeball may not act in concert, or the rectus abdominis may be so affected that the patient cannot sit.

Although the loss of power frequently attacks groups of muscles which are more or less correlated in their action, yet, as Gowers has shown, different parts of a muscle may be affected in different degrees. Some fingers are more paralysed than others, and in the "upper arm" type one part of the deltoid may be weaker than another. Sooner or later the electrical reactions observed in nerve degeneration and known as loss of Faradic response occurs.

(To be continued.)

MEDICINE.

CONDITIONS SIMULATING ENLARGEMENT OF THE LIVER.—III.

PANCREATIC TUMOURS.

THE points of distinction between a pancreatic and a hepatic enlargement are as follows:—

A pancreatic tumour is usually situated between the ensiform cartilage and the umbilicus. It does not as a rule occupy the right hypochondriac region unless it is a very large cyst—a so-called pancreatic cyst, which in many cases is really a cyst of the lesser omental sac—and in this case it may almost fill the whole abdominal cavity.

On account of its close proximity to the aorta a well-marked transmitted pulsation may be seen and felt in the tumour. Neither edge nor notch can be felt. A pancreatic tumour is deeply situated in the abdomen, is fixed, and does not move during respiration. A liver tumour is superficial, close under the abdominal parietes, and it moves freely with respiration. The stomach lies in front of a pancreatic tumour and behind an enlarged liver. If this point cannot be determined by the ordinary methods of examination, the stomach should be distended with gas by administering bicarbonate of potash and tartaric acid in separate solutions, after which its relations will nearly always become obvious. There is usually resonance over a pancreatic tumour unless it is very large, whilst a big liver is generally dull to light percussion. A large hydatid cyst of the left lobe of the liver is the tumour which is most likely to be mistaken for a pancreatic cyst.

OMENTAL TUMOURS.

The commonest omental conditions to simulate a big liver are those which result from inflammatory thickening, tuberculous peritonitis, and carcinoma. The mass may be more or less smooth with what feels like a well-defined hepatic edge, or it may be irregular, nodular, and large. The points of distinction are as follows:—

An omental tumour is apt to occupy the epigastric or umbilical regions. It may, however, lie across the abdomen, stretching from one hypochondrium to the other. It is superficial, and it moves slightly during respiration, unless it is adherent to the abdominal wall.

In the case of an omental tumour the observer's hand can usually be placed between it and the ribs, even though its upper limit cannot be determined. In the case of a liver enlargement the mass comes down close under the costal margin, and the hand cannot be inserted above it.

The stomach lies above an omental tumour, but behind a liver tumour, so that in the former case there is resonance above the tumour between it and the ribs, whilst in the case of an enlargement of the liver there is dulness which is continuous with the normal hepatic dulness. Tuberculous disease of the omentum usually occurs as a part of tuberculous peritonitis, of which there may be separate evidence, such as redness, cedema, and purulent discharge in the neighbourhood of the umbilicus, and so on. Calmette's reaction may be tried and found to be

positive. There may be ascites requiring the performance of paracentesis abdominis, and tubercle bacilli may be found in the fluid, either by direct examination or by animal inoculation.

Fæcal Accumulation in the Hepatic Flexure or in the Transverse Colon may be mistaken for an enlarged liver. To distinguish the two the following points should be attended to:—

In fæcal accumulation cases there is usually a history of obstinate constipation and possibly of attacks simulating intestinal obstruction.

The tumour is of an irregular form, generally more or less cylindrical, the shape varying with the amount of fæces present.

No definite edge or notch is to be made out as a rule, unlike the case of the liver.

The mass may sometimes feel almost like putty, the fingers being able to mould it into various shapes.

The hand is nearly always able to get between the mass and the costal margin. This is hardly ever the case with an enlarged liver.

On light percussion the fæcal mass may give a dull note, but percussion of any force will nearly always give a more resonant note with impacted fæces than it would with a liver enlargement.

Tumours of the Abdominal Wall or Rigidity of the Recti Muscles may also be mistaken for enlarged liver. In the case of a tumour in the abdominal wall the relation of the mass to the abdominal muscles must be determined, and this is best accomplished by getting the patient to lie on his back and then to raise his neck and head from the pillow; the abdominal muscles will at once become firmly contracted, and it can then be ascertained whether the tumour has become more or less prominent than before. The test is not absolutely certain, of course, for the mass may be in the abdominal wall and yet behind the muscles, in which case it would become less obvious under the above procedure precisely as an intra-abdominal mass would. If it becomes more prominent, however, it is in the abdominal wall.

A tumour of the wall does not move up and down during respiration, whereas a tumour of the liver moves freely downwards when the patient inspires deeply, unless indeed the hepatic mass has become fixed to the abdominal wall.

The patient should be examined in the knee-elbow position. A growth in the abdominal wall becomes more prominent, and it may be felt to have no deep connections, whereas an intra-abdominal tumour, unless it is adherent to the abdominal wall, will become less definite.

In many cases it is quite impossible to arrive at a definite conclusion unless an examination is made under a general anæsthetic. In the case of rigidity of the muscles the latter become relaxed under the influence of the anæsthetic, and a much more thorough investigation of the abdomen by palpation can be made.

TREATMENT OF TUBERCULOSIS WITH MERCURY.

PAPERS on the above subject by Surgeon Wright, of the U.S. Navy, though attracting much attention in America and describing some remarkable results, have not yet been brought under general notice in this country in any detail. By far the most striking argument is the following statement, referring to tuberculous cases at the naval hospital at New Fort Lyons, Colorado:—

SURGEON WRIGHT'S STATISTICS.

"During the first quarter, ending March 31, 1908, our death-rate was 11.29 per cent.; during the following quarter, ending June 30, the death-rate was 4.76 per cent. During the quarter ending September 30 we have had but one death, with a daily average of 105 patients, giving a death-rate of 0.95 per cent., or a reduction over the previous quarter of 80 per cent., and over the quarter ending March 31 of 91 per cent. . . . These results appear all the more remarkable when we consider the fact that over 60 per cent. of the patients on admission are far advanced, in many of whom grave secondary involvements complicate the serious pulmonary lesions."

The author was led to give mercury by observing rapid improvement under this drug of patients suffering from both syphilis and tubercle. But the great majority of those above referred to are vouched for by the senior medical officer of the hospital to be cases of pure tuberculosis. At first oral administration was employed, but gastric derangement caused intra-muscular injection to be substituted. Besides pulmonary cases, 15 laryngeal—10 of them ulcerative—are said to have been cured, and genito-urinary lesions to have been greatly benefited. Surgeon Wright recalls the similarity microscopically of

gumma and tubercle, and advances the rather interesting speculation that Lustgarten's bacillus, which its discoverer found to disappear from the tissues of syphilitics under mercury and which resembles the tubercle bacillus closely, is really the tubercle bacillus itself.

METHOD OF ADMINISTRATION.

Real interest, however, centres in the directions as to technique and dosage; for the treatment is simple and seems worth trying, and no injurious effects have yet been reported after experience extending over 1,100 injections. First of all, the usual general treatment must not be neglected. The preparation used is hydrargyri succinimidum, dissolved in distilled water, which, like the needle and syringe, is boiled for twenty minutes. The solution then made is gr. $\frac{1}{8}$ to 10 minims. The patient lies prone on a table, and the skin of the buttock is prepared with scrubbing-brush, soap, alcohol, ether, and perchloride solution. The surgeon's hands are likewise sterilised.

The hypodermic needle is driven in with a quick downward plunge. If blood issues it must be re-inserted, as a vein has been entered; if not, the syringe is connected and the drug injected. The dosage is an injection every other day, beginning with gr. $\frac{1}{16}$, and increasing gradually to the therapeutic limit, perhaps gr. $\frac{3}{8}$. The dose is then halved, and injections continued until thirty have been given. Next follows two weeks' rest from all medication, and then injections are resumed. Indications to stop or restrict treatment are sore gums, or a slight rise in temperature, or loss of weight or appetite. The treatment must also be modified to suit individual cases.

ATROPINE IN ACUTE ASTHMA.

THE treatments that have been recommended for asthma at different times are very numerous—sprays, medicines, diets, cauterisations, inhalations, and so on—and no two authorities are in absolute agreement as to the best prophylactic treatment between the attacks.

There are many who hold that atropine is the ideal medicine for the relief of the acute attack itself. Stimulation of the vagus in the cat causes spasmodic contraction of the muscles of the bronchioles precisely similar to that which occurs reflexly or spontaneously in asthma. Pressure on the vagus in man is capable of calling forth an attack of asthma; a tumour irritating that nerve has been known to do so. Experiments show that atropine paralyses the nerve endings of the vagus in the bronchioles. Hence it is easy to explain scientifically why it is that the subcutaneous injection of $\frac{1}{160}$ to $\frac{1}{80}$ grain of atropine stops the stormiest symptoms of an attack of asthma in from ten to twelve minutes. The effect of the single dose may pass off before the attack of asthma is itself exhausted, and, therefore, to prolong the good effects of the atropine it is often wise to give morphine at the same time, in a dose of not less than $\frac{1}{4}$ grain.

Various celebrated sprays and inhalations that un-

doubtedly give great relief in asthma cases contain atropine as one of their chief ingredients. Ritsert's inhalation fluid contains atropine, belladonna, stramonium, and saltpetre.

Two useful formulæ which may conveniently be prescribed as inhalations, or altered to suit individual cases, are as follow:—

(1) Atropine nitrite	...	...	0.6
Cocaine nitrite.	...	...	1.0
Glycerin	...	...	32.0
Water	...	...	to 100 parts, and
(2) Atropine sulphate	...	...	0.15
Sodium nitrite	...	...	0.6
Glycerine	...	...	2
Water	...	...	15 parts.

Atropine may also be used as a prophylactic against an asthma attack. Trousseau's method is to prescribe $\frac{1}{160}$ grain of atropine in pill form daily for two days, then increasing the dose by $\frac{1}{160}$ grain in the day every second day until the patient takes altogether $\frac{3}{16}$ grain three times a day. This is continued for four weeks, and in many cases the results are good.

SURGERY.

ENLARGEMENT OF THE LOWER END OF THE FEMUR.

THE differential diagnosis of the conditions which cause enlargement of the lower end of the femur, particularly when the condition is a chronic one, may be most perplexing.

Even in acute disease the recognition of the cause is not always an easy matter, and cases in which osteomyelitis of the femur has been mistaken for and treated as rheumatism of the knee-joint must have come within the experience of most of our readers. But if the clinical aspect of the case is carefully considered, there is really little excuse for such an error. To start with, osteomyelitis generally occurs in children who are recovering from one of the acute exanthemata by which their resistance to a hæmic infection has been markedly diminished. There may or may not be a history of a slight injury to the limb.

The disease runs an acute course with pronounced constitutional symptoms, so that the child looks very ill and complains of great pain in the limb. There is also continued pyrexia, the temperature often remaining persistently high, and occasionally reaching 105° F. Rigors are a not infrequent feature. In acute rheumatism there are constitutional symptoms of a similar order, though not so severe, and the swelling of the joint is transient. In a chronic rheumatic joint the constitutional symptoms are absent. But a careful examination of the limb will reveal greater discrepancies. In osteomyelitis the greatest swelling in the circumference of the limb occurs not at the level of the joint, but above it. The joint itself is unaffected, and there is no evidence of free fluid in it, although movements may be limited on account of pain. In rheumatism, acute or chronic, the swelling is in the joint itself; movement causes great pain, and the normal anatomy of the joint is modified by fluid in the synovial membrane.

Unfortunately, salicylate in some form is often given in doubtful cases. Now, apart from its specific action on rheumatic affections, salicylates have an antipyretic effect, so that a false sense of security may result, if it is argued that a fall in the temperature denotes that the case is certainly rheumatic in origin. One other acute condition may give rise to great difficulty in diagnosis: this is infantile scurvy. It is a disorder of childhood which is caused by injudicious diet. It is characterised by constitutional symptoms, anæmia, pyrexia, and anorexia; but its distinguishing feature is that it causes hæmorrhages under the skin, from mucous membranes, and under the periosteum. When the subperiosteal hæmorrhage occurs in the lower end of the femur it causes an enlargement of the lower end of the bone, which is very tender; and this may be confused with an osteomyelitis. But the swelling is usually confined to one part of the circumference of the bone, and does not extend all round, as in osteomyelitis, and this fact, combined with the presence of petechiæ and hæmorrhage from the gums or mucous membrane, should be sufficient to put one on one's guard.

The problem presented by chronic swellings is one of greater difficulty. Roughly speaking, the question

here resolves itself into this: is the swelling due to a chronic inflammatory process, or is it a new growth? A sclerosing periostitis leading to a general enlargement of the bone is less common in the femur than it is in the tibia. This is probably due to the fact that the femur is well covered by muscle, while the tibia occupies an exposed position; an injury is a common factor in the causation of this condition. On the other hand, central abscess or necrosis with distension of the shaft of the bone is more often found in the femur, and it is these cases that are so difficult to differentiate from neoplasm.

A positive history of past syphilitic infection or the presence of a tuberculous focus in some other part of the body will, of course, be helpful, and the presumption then is that the enlargement of the femur is due to the same cause. Apart from this, little help is usually obtained. The swelling comes on gradually, and no cause can be assigned for its commencement. It may or may not be associated with pain of a dull boring character, which is sometimes sufficiently intense to keep the patient awake at night, or to cause him to limp during the day. Movement at the knee-joint may be limited; but this comes on later, and is secondary to the overgrowth of the lower end of the femur, and is not caused by changes in the joint. There may be pyrexia in sarcoma just as in inflammatory conditions.

The femoral glands may be enlarged in either condition. It is commonly said that sarcoma does not cause enlargement of the lymphatic glands which drain the site of the lesion, except when the growth involves the tonsil, testis, or thyroid. But in actual practice it will be found that such a rule is more honoured in the breach than in the observance; in fact, in the last three cases of sarcoma starting in bone or periosteum which have come under the writer's observation, the primary lymphatic glands were invaded by sarcoma cells in all of them.

The one point on which reliance may be placed is this: a periosteal sarcoma forms a hard discrete mass which is well defined, and its upper border ends sharply. An inflammatory swelling ends gradually and shelves off into the normal bone. Moreover, it is generally tender on percussion; this is characteristic of all inflammatory bony swellings. If the case can be watched, iodide of potassium should be given, and in a syphilitic case improvement will begin to show itself; or again, a central tuberculous focus may make its way to the surface and declare itself as a definite abscess.

A skiagram of the swelling should always be taken, since valuable evidence may be thus obtained, especially if the services of an expert radiographer can be obtained. But it is not easy, without a large experience, to distinguish between a central sequestrum surrounded by involucrum on the one hand, and the shaft of a femur embedded in a periosteal sarcoma on the other. But the diagnosis may remain in doubt, even after all ordinary methods of examination have been tried. In such a case an exploratory incision is necessary.

GYNÆCOLOGY.

THE TREATMENT OF PROLAPSE OF THE UTERUS, CYSTOCELE AND ELONGATION OF THE CERVIX.

Much misconception exists as to the modern operative treatment of uterine prolapse and its attendant disorders. Hysterectomy by itself will not cure the vaginal eversion and cystocele which accompany prolapse, for these conditions are apt to recur after the uterus has been removed, and the symptoms in this case will be much the same as if the uterus were present. In those cases which hysterectomy has apparently cured, an explanation will be found in some septic process set up in the bases of the broad ligaments, by which the vaginal walls are fixed in the pelvis—in other words, by a pelvic cellulitis. This process cannot be regarded as an ideal method of cure; for it is accidental, it cannot be controlled, and it may prove fatal. Ventro-fixation too by itself is no cure for cystocele or elongated cervix, for these will occur although the fundus is firmly fixed to the abdominal wall. In very mild cases, no doubt, ventro-fixation produces marvellous results; but mild cases are just those which can be cured by any of the simple plastic operations on the pelvic floor which are practically devoid of risk. The abdominal route is quite unjustifiable for mild cases of prolapse, say, of the first degree, even if ventro-fixation were an ideal operation.

On the other hand ventro-fixation and even hysterectomy, combined with properly planned plastic operations on the pelvic floor, may prove eminently useful; but their use for the cure of prolapse and cystocele must be strictly limited in this way. The principle upon which a severe case of prolapse with cystocele and cervical elongation must be attacked is that of restoring as far as possible the uterus, vaginal walls, bladder, rectum, and pelvic floor to their normal relations to one another, and not by any artificial method of slinging up the uterus. To carry out this principle several distinct operative procedures are necessary, all of which are mutually dependent and essential. These procedures naturally depend upon the degree of uterine prolapse, of cervical elongation, of cystocele, and of rectocele. In general it may be said that if the uterus is congested and there is endometritis, the cavity must be first dilated and curetted with a sharp instrument. If the cervix is elongated it must be amputated. If there is a cystocele the bladder must be dissected free from the vaginal wall and pushed up into its normal position, and sutures must be placed to keep it there. Redundant vaginal wall is then cut away and the wall sutured. If there is a rectocele the rectum must be similarly treated. Finally, the perineum must be restored and extended anteriorly. These five operations are absolutely necessary in most cases of any severity, and may be all carried out at one sitting by a moderately rapid operator. There are a few details of these operations which require to be amplified; but they are not in any way novel; in fact, they have all been performed, lauded, and condemned for the last quarter of a century or longer. We say "condemned" because there are operators who believe them useless for severe cases.

These operations must all be performed on each case as a rule; they must be carried out step by step, with the strictest attention to asepsis, technique, preparation, and after-treatment. If they are regarded as minor surgery, and any essential is omitted, the result will probably be absolute failure. A mere perineorrhaphy is quite useless to cure prolapse with cervical elongation and cystocele, and, further, an amputation of the cervix will not cure a prolapse if no plastic work is done.

To secure asepsis, cleansing of the cervix, vagina, and external genitals must be carried out in the same way as for a laparotomy—namely by shaving, ether soap and hot water, followed by an efficient antiseptic. The vagina cannot be made aseptic by a douche or douches; it must be scrubbed with absorbent wool, soap, and antiseptic. Boiled gloves should be worn by the operator, for the bare hands will easily infect sutures and ligatures. No douches should be given afterwards, for they are almost certain to introduce sepsis from without, and even if they could be given aseptically they are useless and unnecessary. Suture materials must be most carefully prepared, and for all sutures inside the vagina absorbable catgut is preferable. It is a great annoyance, and may be harmful to have to remove sutures from the cervix or vaginal walls. It is usually unnecessary even to pass a catheter; if the patient can pass urine naturally she should do so, the parts being gently syringed with an antiseptic after each urination.

In amputating the cervix it must be remembered that the supra-vaginal portion is the part affected. Therefore we must separate the bladder in front and the peritoneum behind until the desired level is reached. The section of the cervix must be made in such a manner that the vaginal walls can be easily sutured to the cervical muscle and mucous membrane. After dissecting the bladder off the prolapsed vaginal wall, that viscus must be retained in its place by sutures which bring together the paravaginal connective tissues before cutting away redundant vaginal wall. The excision of an oval piece from the anterior vaginal wall and a purse-string suture after the method of Stolz is an effective way of doing this. The methods of performing posterior colporrhaphy and perineorrhaphy are well known, but they must be thorough and far reaching. It is often necessary to separate the rectum from the vagina almost up to the cervix before the desired result is obtained. The connective tissues beside the rectum may be brought together first so as to retain the rectum in its normal place before suturing the posterior vaginal wall. Carried out in this manner very serious cases of prolapse can be dealt with successfully, but the whole sequence must be looked upon as necessary; the operation must be approached as if it were major surgery, as it is in reality; and no detail must be omitted. Finally, at least two months' rest must be allowed for the cicatrices to consolidate. During this time, if the patient must stand upright a firm perineal pad and binder should be worn.

MEDICO-LEGAL POINTS.

MEDICAL EXPERT EVIDENCE.—II.

(Continued from p. 96.)

It is extremely difficult at times to determine who are, in point of competency, experts. As a general rule, it may be said that any practising medical man is competent to express an opinion as an expert on a medical question. Physicians and surgeons are presumed to be acquainted with all matters pertaining to their profession, and to be competent to testify concerning them; and their opinions are admissible in evidence upon questions that are particularly and legitimately embraced in their profession and practice.

In questions of legitimacy and divorce, obstetricians of high standing are consulted on both sides; in questions affecting the sanity of persons, those who have acquired a reputation in the treatment or observation of the insane are selected; in the various obscure injuries resulting from railway accidents, surgeons of repute are summoned as experts to give the results of their experience. There are many of these cases which could not possibly be settled without this collateral aid, the questions at issue not being based on matters of fact occurring within the ordinary range of practice, so much as on an enlarged experience of a particular department. There is, however, a strong public feeling against the admission of the testimony of experts. One writer remarks:—"It is impossible to shut out such evidence altogether, but there is nothing which brings more discredit upon the administration of justice. There is one consequence of its admission which is common to all cases in which it occurs—it is, that no difficulty has ever been found in obtaining any amount of evidence of this description on either side of any point at issue." The cause of this evil is that the solicitors on each side are allowed to search the whole profession until they can find one or more persons ready to adopt their respective views; when once in Court, provided a man can call himself a "doctor," his qualifications and experience sometimes escape a rigid scrutiny. Persons have thrust themselves, or have been thrust into cases as experts without any pretensions to such a title, either by their professional standing or experience. A man may have been engaged for a few years only in the ordinary routine of medical practice, and may have had no special experience in the subject on which an opinion is required. He will be described by his counsel as "a most learned and eminent member of the profession, on whose opinion the jury are as much entitled to rely as on that of the 'highly respectable gentleman' called on the other side."

It is extremely difficult at times, therefore, to determine who are, in point of competency, experts. It is wrong to assume, in relation to any of the physical sciences, that because a man has been a practitioner in it he is equally competent and skilful in all its departments. Generally, to obtain eminence in any science is to limit oneself to some one particular branch of it. Medicine is no excep-

tion to this rule. In any event, the law may be considered as simply requiring that the party offered as an expert shall, in the whole view of the case, present evidence of having had the best opportunities for perfecting his knowledge in that particular subject on which his opinion is desired. Beyond this, and as between varying degrees of competency among experts, no other test of qualification can be applied, for no other is, in fact, possible; and since errors in judgment may occur here as well as in any other department of human investigation, there is no means of knowing absolutely whether the witness is qualified to deal, or not, with all the problems which the complexities of any given case may present to him.

As in other cases of opinion evidence, the opinion of a medical expert must be founded on a proper basis of fact, and is not admissible unless it is so founded. It may be based, however, on his acquaintance with the person whose condition is under investigation; and a physician who frequently met a person and was well acquainted with him and frequently attended him has sufficient knowledge to form an intelligent opinion as to whether a given condition resulted from illness or injury. And a medical opinion may also be based upon a medical examination; and though the physician was called and the examination made a long time before or afterwards, he may testify as to the condition of the person at the time when he was called in. Nor is the opinion of a medical expert rendered incompetent by the fact that it was based in part upon the statements of the patient or injured person; though it cannot be based wholly on the patient's statements privately made to the expert. And where the medical expert has not made a personal examination of a patient, the proper practice is to put the question to the witness, citing the supposed facts hypothetically upon which the opinion is wanted. A medical expert, however, cannot give an opinion based on non-existent facts, or facts concerning which he had no knowledge; and he cannot testify to an opinion formed upon information derived from private conversation with another, or upon facts proved by other witnesses where the evidence as to such facts is conflicting, since that would involve a decision of an issue for the jury.

To entitle medical expert testimony as to apprehended consequences of a condition or injury to consideration, the consequences must be such as in the ordinary course of nature are reasonably certain to ensue; consequences which are contingent and speculative or merely possible are incompetent. And the possible effects attending the progress of a disease, and its probable duration, and the results which may ensue to the person afflicted, cannot be given. Nor are medical witnesses competent to testify as to what results are likely to follow from an injury. And a physician cannot speculate upon the difference in effect of an injury to a frail person

and an injury to a healthy one; and he is not competent to testify on an issue as to a fractured limb, as to the consequences of a hypothetical second fracture. Expert testimony as to future consequences which are reasonably expected to follow an injury, however, may be given for the purpose of enhancing the damages to be awarded; and a physician may testify as to what results will follow with reasonable certainty from conditions observed by him. Nor does the uncertainty of a medical opinion as to probable future results, founded upon present conditions, prevent it from being competent; and a physician may testify as to the probable length of time that a diseased or injured person will live, though stating that he can only give the probability from the history of other similar cases.

The question as to what certain symptoms indicate is a matter of medical skill, and a particular subject for medical testimony; and a physician may be asked to describe the symptoms which ordinarily and necessarily accompany a specified trouble or injury. And while it may be common knowledge that one coming in personal contact with another infected with a contagious disease, or occupying the same room with him, is exposed to it, whether or not upon a given state of facts a person will be deemed to have been exposed, is a medical question for an expert. And the contagious character of the disease and the length of time its poison retains its vitality are also medical questions presenting subjects for professional opinion; and so are questions as to the tendency of certain conditions to produce sickness, or to make injury more probable. Nor is a physician incompetent to give an opinion as to vital spots and places where it is dangerous to receive an injury or blow, or as to the power of resistance of a skull and as to the force requisite to break it.

The nature and extent of injuries, and the present condition of a person ill or injured, are questions peculiarly within the province of medical skill and science, and always proper to be addressed to an expert. And a physician may give his opinion, based on such conditions and the nature of the injuries, on the question as to the causes from which they arose, and as to whether they were produced by violence or disease, and as to whether such a condition could have existed if described circumstances had taken place, such opinions not being objectionable as speculative. And such opinions may be founded upon a statement of the nature of the injury, and subsequent symptoms and present physical conditions, as testified by others; or upon an hypothesis stating the facts of the case upon which an opinion is desired. And a physician may properly give an opinion as to the cause of a change in condition between two different periods or examinations; or as to whether there might have been an injury which would account for the change, besides the injury in question; and a medical opinion as to whether a described cause would produce existing conditions is competent.

The opinions of medical experts as to the cause of death are always admissible when such cause is

involved in doubt and there are no witnesses to the occurrence. And where death might have resulted from different causes, an expert may give his opinion as to how the injuries were inflicted; and as to whether or not they were inflicted before death; or that they could not have been inflicted in a designated way; or as to the length of time since death took place. Such opinions are admissible when founded either on personal knowledge of the facts of the case or upon a statement of the case as testified to by others; and they may be based on the previous condition of the person and the subsequent condition of the body, or upon the condition and position of the body and the pathological condition of its internal organs after death is ascertained by examination.

Medical men may likewise, upon facts testified to either by themselves or by others, give their opinions as to whether a particular blow or injury would be adequate to cause death; or even whether such injury was the actual cause of death in the particular case. And physicians who have examined a person's wounds before and after death may give an opinion as to whether an instrument identified as the one used is such as to produce death when used in the manner described. And a physician may properly testify that he knows no disease which would produce death with certain described symptoms. But a physician cannot be asked whether the testimony and described autopsy are such as to enable a physician to tell the cause of death with any certainty. The question should recite the scope and character of the autopsy.

(To be concluded.)

PHARMACEUTICAL NOTES.

Artificial Calamine.

THE question of the colouring of lotions, powders and ointments for dermatological practice is one to which sufficient importance is not always attached. For treatment of affections of the skin in the case of patients who are able to go about their ordinary business it is desirable that applications prescribed should be, as far as possible, invisible. Calamine was formerly used to a great extent because of its curative properties, and because its colour resembled to some extent that of the skin. This substance, however, was not included in the British Pharmacopœia of 1898, and since then practitioners have found it difficult to obtain calamine preparations of standard quality or colour. Professor R. B. Wild has recently been investigating this question, and gave the results of his experiments at the annual meeting of the British Pharmaceutical Conference which has just been held at Manchester. He recommends an artificial calamine composed of $2\frac{1}{2}$ parts of Armenian bole and $97\frac{1}{2}$ parts of precipitated zinc carbonate as a preparation which comes very near indeed to the colour of the normal skin. As preparations of this character are frequently required in dermatological practice it is desirable that a suitable formula should be devised and included in the Pharmacopœia.

DISEASES OF CHILDREN.

NASAL DISCHARGES—I.

SEEING that the main symptom of affections of the nose and naso-pharynx is a discharge from the anterior nares, it will be useful to review the different conditions which give rise to this symptom. It is one of very common occurrence and does not receive the attention it deserves. Often it is due to an inflammatory affection, which extends backwards, and is liable to set up otitis media through infection of the middle ear by way of the Eustachian tube.

1. *Acute catarrhal rhinitis*, acute coryza, or simple nasal catarrh. This is especially common in newborn infants and during the first three years of life. Its importance is particularly great at this time, for blockage of the nose leads to mouth-breathing, inability to suck, refusal of food, wasting, fatigue, dyspnoea, insomnia, and fever. It is commonly the result of microbial infection, and has been ascribed to the influenza bacillus of Pfeiffer, the bacillus coryzæ segmentosus (Cautley) or bacillus septus, the micrococcus catarrhalis (Kirchner), Hoffmann's bacillus, etc. Probably numerous organisms belonging to the influenza group may give rise to it. Or it may indicate the onset of measles or true influenza. Occasionally one comes across cases of vaso-motor origin, in which profuse watery discharge and much sneezing last for a few hours up to a day or so. More commonly acute coryza runs its course in about one week. Of the predisposing causes we may mention indoor life, heated rooms, closed bedroom windows, excess of clothing, lack of exercise, malnutrition, rickets, and adenoids. Possibly artificial feeding, by lack of suckling, is a concomitant factor by leading to mal-development of the nasal chambers. More probably it acts through imperfect nutrition, because of a deficiency of proteid and fat, and an excess of starchy food in the diet. Congenitally syphilitic babies are also more liable to the affection. The true exciting cause is, without doubt, some organism, perhaps normally an inhabitant of the nose or naso-pharynx, but whose virulence is exaggerated or relatively greater, because of lowered local or general vitality, from chill, wet, cold winds, sweating, etc. Even a strong healthy child, brought up on approved hygienic principles and without a trace of adenoids, may develop attacks of this nature through being out on a cold and windy day and inhaling germ-laden dust. The finely powdered dust of wood pavements seems especially irritating to the mucous membranes. Earache and deafness are frequent symptoms. Extension also takes place to the eyes and lachrymal ducts, and occasionally to the various fossæ. Alimentary disturbance and pulmonary affections are common complications. The obstructive effects are the most serious, for in a weakly babe they may result in atelectasis or even in sudden death.

Active treatment of acute coryza in infants is much more necessary than in later life. Keep the child in bed, in a warm room, at 60° F. to 70° F., and have the air moistened by means of a bronchitis kettle. Place a pledget of absorbent cotton-wool, soaked in 0.001 per cent. adrenalin solution, in each nostril

alternately for two or three minutes. The effects last for three or four hours. It may be repeated as often as this, or, in very bad cases of congestion and obstruction, before each feed. A little borated vaseline introduced into the nostrils will clear away mucus by causing sneezing. Give frequent inhalations of ol. pini sylvestris or turpentine dropped on lint. Apply to the edges of the nose and the upper lip, in order to prevent excoriation, cold cream or an ointment of boric acid grs. 20, salicylic acid grs. 3, vaseline one half ounce. If crusts form, anoint with weak white precipitate ointment. Other applications, in place of the adrenalin solution, are a solution of menthol, 1 to 2 per cent. in olive oil; chloral hydrate, grs. 5 to 10 in half an ounce of castor oil, menthol gr. 1, camphor gr. 1, liquid albolene 1 oz.; a 1 to 2 per cent. watery solution of cocaine. Occasionally it is even necessary to insert a small rubber catheter in each nostril to keep the passage open. In later stages, when the discharge has become chronic and purulent, perhaps blood-stained, apply the adrenalin pledgets as before, and drop into each nostril one drop of a 0.5 to 1.0 per cent. solution of silver nitrate. Sometimes better results are obtained by cleaning away the mucus with an alkaline lotion and painting the mucous membrane with silver nitrate solution, which may be as strong as 2 per cent. Insufflations, douches and syringing should be avoided in the treatment of the disease in infancy.

Internally, small doses of aspirin or salicin are most satisfactory. Belladonna or its alkaloid is sometimes given with a view to reducing the secretion. Mild diaphoretics relieve both the fever and the local congestion. The bowels must be opened by grey powder or calomel. The diet should be light and digestible. It may be requisite to feed a debilitated infant by the stomach tube, and to give alcohol and strychnia freely. Temporary starvation is valuable for strong children. Older children are treated on similar lines, and with mustard foot-baths, hot diaphoretic drinks, and Dover's powder at the onset. Aspirin, salicylates, sodium benzoate in one-drachm doses, and alkalies should be given. Inhalations of turpentine, ol. pini sylvestris, ol. eucalypti, formalin, formaldehyde and menthol, or menthol and camphor with eucalyptus oil, are all recommended. Or a 10 to 20 per cent. borated vaseline is snuffed up into the nose, which is blown at the end of ten minutes. In blowing the nose, under all circumstances, only one nostril should be closed at a time. Protargol, 10 per cent., may be sprayed or painted on the nasal mucosa once or twice in the early stages; or a paint of cocaine, 2 per cent., in glycerin or liquid vaseline. Various powders are used as snuffs for adults, but are rarely advisable for children. A piece of ointment, the size of a pea, made of one or more of the powders of salol 5 gr., boric acid 1 dr., menthol 5 gr., resorcin 10 gr., camphor 1 dr. to the ounce of vaseline, can be inserted into the nostrils twice a day.

(To be continued.)

MOTING NOTES.

THE BUDGET AND THE DOCTOR'S CAR.

THE NEW TAXES ON CARS AND PETROL.

THE proposals of the Chancellor of the Exchequer in regard to new taxes on motor cars and petrol are, no doubt, already familiar to readers. The new taxes on cars do not come into force until next January, but the petrol tax is already making its influence felt. During the last few years public speakers, who have voiced the views of some of the leading motor organisations, have constantly urged that they would not object to a revision of the motor-car licences, provided it was accompanied by the creation of a central department responsible for the maintenance of the existing roads and the construction of new ones, designed with full regard to the exigencies of the new traffic.

Mr. Lloyd George has not only taken these advocates at their word, but has gone beyond their well-meant suggestions by a higher scale of taxation for cars, and also by adding 30 per cent. to the cost of running them on the road. The tax on petrol is altogether out of proportion to the necessities of the case, and it is generally believed that the Chancellor's estimate of the revenue likely to accrue will probably be found an under-statement of the position. Had the proposal been for a 2d. tax with a rebate of half in the case of cars used for commercial or professional purposes, the imposition could be borne with more resignation; but to increase the price by more than 30 per cent. is really unwarranted. As doubtless my readers know, this imposition of 3d. per gallon has already led to an increase of 4d. to the user. The extra penny has been added by the petrol companies to cover the cost of systems of checking, granting certificates, claims for exemption, etc., and other detailed work which necessarily involves the importers in additional expense. There has been a certain amount of discussion as to whether doctors are eligible for the petrol rebate, and it undoubtedly seems anomalous that they should receive a rebate on the tax of the car and not on that of the petrol that drives the car. I regret to say that the Chancellor has lately stated that medical men will not receive this favour. After all, we have something to be thankful for in regard to the rebate on the car tax, and we must not forget that we are the only class of professional man whose claims to exceptional treatment have been recognised. I understand that representations have been made to the Chancellor by veterinary surgeons, school inspectors, etc., for a similar rebate, but without effect.

TAXATION BY CYLINDER BORE.

With regard to the classification of motor cars for the purposes of taxation, this has hitherto been based on the weight of the car, but at the present time it is very generally agreed that power rather than weight should be the basis of graduation. Taxation by cylinder bore, as proposed, appears to be the only way in which the horse-power may be readily arrived at, and it is fairly accurate for

ordinary touring cars. There is little doubt that the Royal Automobile Club's formula will be used for rating purposes. In this

$$\frac{D^2 \times N}{2.5} = \text{H.P.}$$

D being the diameter of the cylinder in inches, and N the number of cylinders.

The following table gives the bore (in inches and millimetres) and the R.A.C. horse-power of most of the 1, 2, and 4-cylinder cars that are used by medical men. By reference to this anyone knowing the bore of his cylinder or cylinders can see at a glance the horse-power of his car and the licence fee that will in future have to be paid, not forgetting, of course, that half-rates only in each class are to be paid by members of the profession.

SINGLE-CYLINDER CARS.

Licence £2 2s. per annum			Licence £3 3s. per annum		
Bore			Bore		
Inches	m.m.	H.P.	Inches	m.m.	H.P.
3½	89	4.9	4½	105	6.8
3¾	92	5.25	4¾	108	7.2
3⅞	95	5.6	4⅞	111	7.6
3⅝	98	6	4⅞	114	8.1
3⅞	100	6.2	4⅞	117	8.5
4	102	6.4	4¾	124	9
			4¾	124	9.5
			5	127	10

TWO-CYLINDER CARS.

Licence £3 3s. per annum			Licence £4 4s. per annum		
Bore			Bore		
Inches	m.m.	H.P.	Inches	m.m.	H.P.
2½	75	6.9	3½	98	12
3	76	7.2	3½	100	12.4
3½	79	7.8	4	102	12.8
3½	80	7.9	4½	105	13.6
3½	83	8.4	4½	108	14.4
3½	86	9.1	4½	121	15.3
3½	89	9.8			
3½	92	10.5			

FOUR-CYLINDER CARS.

Licence £3 3s. per annum			Licence £4 4s. per annum		
Bore			Bore		
Inches	m.m.	H.P.	Inches	m.m.	H.P.
2½	62	9.4	2½	70	12.4
2½	64	10	2½	75	13.2
2½	65	10.6	3	76	14.4
2½	67	11	3½	79	15.6

It is unnecessary to work out the R.A.C. horse-power of the 3-cylinder type of engine, as this variety is practically obsolete, and at the present time is used by only one or two manufacturers, but most medical men will find their car's cylinder dimensions in the table.

As stated above, the Chancellor the Exchequer, when recently questioned with regard to the eligibility of medical men for the rebate in the petrol tax, replied in the negative. It appears, however, that there is some hope of concession after all, as since then, replying to a further question, he intimated his willingness to receive a deputation on the matter if he could spare the time. It is to be hoped that he can, since if so it should not be difficult to convince him of the very great hardship of this duty, which, as a member of the House stated, practically amounts to a special income-tax on the medical profession.

"VIATOR."

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

SERUM EXHIBITION AND SERUM RASHES.

By JAMES DUNDAS, M.B., D.P.H.

THE use of sera has now become an essential part of modern therapeutics. Diphtheria, scarlet fever, erysipelas, and puerperal fever are all treated with sera, and in recent years vaccine inoculation for tuberculosis and staphylococcic skin affections has become a routine practice. The exhibition of these substances, while not difficult, is not so simple as mere hypodermic medication. Opsonic investigation has shown us how to control tuberculin treatment and the principles of its action, but much remains unknown or uncertain. "Accidents" in the shape of abscesses and other well-defined disturbances frequently occur, and may be alarming. With certain precautions many of these "accidents" may be avoided.

THE TECHNIQUE OF INJECTION.

Perhaps the most commonly used are the antiphtheritic and anti-streptococcic sera. Each of these is injected in fairly large amounts, so that the practitioner should possess a fairly large syringe, of 10 c.c. capacity at least, and keep it for this purpose alone. These syringes are very liable to get out of order, but careful attention will prevent this, and, as a dirty syringe or needle is always the source of abscess formation, too much care cannot be devoted to them. It is a sound rule after use to pull out the piston to its full extent, manœuvre it until the nut on it engages in the square at the top of the barrel, and by a turn or two of the piston loosen the head of the plunger. The syringe is now ready to be sterilised. Boiling of syringe and needle is the only sound method. The syringe may be then laid aside in its case until required, when the plunger should be tightened up.

Before use it is sufficient to run the syringe through two carbolic solutions—1-20 and 1-80—and then several times through sterile water with the aim of removing the last traces of carbolic. As there is already a certain percentage of carbolic in the serum for preserving purposes, it is inadvisable to add to that amount. The syringe is now ready to be filled. This is most easily done through the wide-bored filler that many makers supply with their instruments. It is removed and the needle affixed, care being taken to expel all air. The site of injection is largely a matter of personal taste. Some prefer to inject between the shoulders, the idea being that the skin is less sensitive there, and that the patient is unable to see what is going on. Objections to this are the comparatively small amount of loose tissue, and that the patient lies on the puncture wound. The writer's invariable practice is to put the patient on the side and stand behind him out of his field of vision. The point chosen lies in the flank half-way between the ribs and the pelvis. The loose skin is pinched up and the needle inserted to its full extent boldly, but without violence. The advantages of this

position are that no pressure is exerted on the site of injection, the patient sees little of what is going on, and is easily held by an assistant exerting pressure on the great trochanter with one hand and controlling the hands with the other. It is a mistake to inject over a rib: the convexity of the rib may snap the needle if the child struggles. On one occasion the writer made an injection into the mamma in a case of malignant endocarditis, in which, on account of collapse and for other reasons, it was not deemed wise even to roll the patient over. Next morning the breast was large, somewhat tense and tender, and the skin was very dark in colour. Fortunately, in a few days the condition disappeared. In several hundreds of injections that is the only accident experienced.

The serum should be injected slowly, as the pain of the operation depends on the separation of the tissues; and concurrently the needle should be withdrawn. On removal of the needle the nurse or assistant should immediately apply a pad of lint and collodion, as the serum tends to leak from the skin puncture. Should the syringe be too small for the quantity of serum to be injected, it is unnecessary to remove the needle. It suffices to withdraw the syringe from the needle, recharge it, expel air, and reinsert it in the needle. This last must be done securely. It cannot be too strongly insisted that abscesses are due to sepsis, and that careful attention to Listerian principles will obviate them.

RASHES AND OTHER SEQUELÆ.

Certain sequelæ of serum exhibition may be expected, and in America one or two deaths have been put down to them. Their causes are not fully understood at present, but it seems evident that they depend on the injection of too much serum for the amount of toxin requiring to be neutralised; and often on a previous injection some days before. This means that too many anti-bodies are produced, and they are, according to V. Pirquet, the source of the trouble. As we have no means, save the rough clinical one, of estimating the degree of toxicity, we are bound at times to overdose the patient. Thus prophylactic inoculations into diphtheria contacts may produce the signs of the so-called "serum disease," and several cases of this type have been reported recently by practitioners who had injected themselves.

Another well-established fact is that repeated doses are more liable to produce symptoms than solitary ones, especially in the case of diphtheria, if the second injection is made ten days to a fortnight after the first. The explanation, of course, is that the anti-bodies, which have taken that time to be produced, come into violent collision with the newly injected serum. The result may be surprising and very alarming unless one is prepared for it, as within

half an hour, or even ten minutes, the patient may be sick and ill, and have a general rash.

The first sign is enlargement of glands to about the size of a split pea in the groin and axilla on the side of injection. These have usually to be looked for, as the patient rarely complains of them. Within a few hours a rash appears, generally round the site of injection, and most usually of urticarial type. This rash may spread over the entire body; or give place to a morbilliform, or, less frequently, a scarlatiniform, eruption which becomes general. The first rash is almost always urticarial; a second may not appear. None of these rashes is persistent. They come and go, and vary in intensity. Their favourite sites are round the needle puncture and on the extensor surfaces of the large joints. On the second day the glands may be the size of a bean, and may possibly be felt in both groins and axillæ. Localised patches of cedema occur. There may be albumen in the urine; whether this is due to the serum is a moot point, the time of onset being late for a diphtheritic albuminuria.

Joint pains and headache are common, but by no means constant, and nothing seems to be very efficacious in relieving them. The small joints of the fingers and wrists, the ankles, knees, and neck are the common situations. "Joint pains" most nearly describes these phenomena. A thorough-going arthritis is not so common.

The whole disturbance lasts four or five days, and is comparatively mild: only in a few cases is there any rise of temperature. As these symptoms, or

some of them, occur in, roughly, 50 per cent. of cases receiving serum, it is as well to safeguard oneself by warning parents of their probable occurrence. Doubt may be entertained of the diagnosis when those rashes appear, and one may be accused of adding measles or scarlet fever to the ills of the patient. Their evanescent character and the absence of catarrhal conditions in the nose and throat serve to differentiate them from these exanthems. The joint pains might suggest acute rheumatism, but the presence of the rash and the absence of a visible acute arthritis serve to clear up the diagnosis.

In scarlet fever anti-streptococcic serum is now being largely used in selected cases. These are the early and intensely septic cases with marked rhinorrhœas, dirty throats and mouths. The degree of toxicity is great, and there is no sign of reaction. In such cases, when, perhaps, 60 c.c. of serum have been exhibited, somnolence ensues and the patient is lethargic, possibly for weeks. Associated with this one finds a general lymphatic enlargement which rarely suppurates. Quite suddenly such cases waken up and begin to take an interest in life. Recovery is slow. There may be joint pains, though they are not evident during the sleepy stage. Rashes are frequent on the extensor surfaces of the limbs about the joints, and are septic in character. An associated erythematous rash rather indicates the serum as being the cause. These phenomena, if uncomfortable, are not dangerous, and the results of treatment justify one in risking the temporary disturbance.

TROPICAL DISEASES.

CLOTHING FOR THE TROPICS.

In the *Journal of Tropical Medicine and Hygiene* for the current month there is a very interesting leader on the question of "Clothing in Tropical Countries." In this it is pointed out that suitable clothing for each individual place may generally be obtained locally, so that the amount of things to be taken out from home may be greatly reduced, and further, that much must necessarily depend on the dryness or moistness of the climate. There is no doubt that the whole question is a very large one, and a book could easily be written upon it.

So much depends on what part of the tropics the individual is going to, on what he is going to do when he arrives there, on how long he is to stay, and on a host of other things. It is certainly best, if possible, to consult someone who has recently returned from the place, because such a person must necessarily have at his finger ends the local knowledge of what is required, and can quickly give information that will save the intending traveller much time and money.

On the whole one is inclined to agree with the advice to purchase locally; but at the same time one must remember that, at least for some of the tropical African colonies, local production of clothes is impossible. On the other hand, in places as widely apart as Trinidad, Singapore, and Hong Kong, to

mention only a few, the quality of the local boots, hats, underclothes, and other garments is remarkably good; but even so, one cannot expect from these the Bond Street or Regent Street cut, which to many people is indispensable. The question of the dryness or moisture of a climate and the material most suited for wearing in either is, of course, a most important item, and this must depend on the special locality, some places remaining the same all the year round, others varying considerably with the seasons. Again a great deal depends on the work of the individual. The planter or outside worker can do with less clothes than the clerk or official in the town, who has to wear linen collars and dress more like his countrymen at home. Such points as these show the difficulty of the subject generally, and how dangerous it is to dogmatise, from experiences obtained in one place, upon other countries and climates. Even in the same climate, what may suit one person may not suit another, and the best advice to give to the intending visitor to the tropics is to seek local information about the place he is going to; failing that, the big tropical outfitters in town will give a fair idea of the essential requisites, and then, when he arrives and sees for himself what his work is to be, he can supplement his stock locally or add to it from time to time.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

FIRE APPLIANCES FOR USE IN HOSPITALS.

I. CHEMICAL AND WATER EXTINGUISHERS.

WITH the view of fighting fire in its very earliest stages, a number of portable appliances have been worked out by different inventors and manufacturers. Portable appliances may properly be divided into two classes—those in which water only is employed, and those in which certain chemicals, bicarbonate of soda, sulphuric acid, and other substances are used to throttle the fire. There is a modification also of the latter form of apparatus, in which the chemicals are used in a dry powder, in place of being dissolved in water, as is the case in the majority of portable appliances.

DRY POWDER APPLIANCES.

The reason for the use of a dry powder, in place of water impregnated with chemicals, is one which applies particularly to hospitals, seeing that so many of them have adopted the electric light. Fires are sometimes caused by what are termed short circuits in the electric wires. Two wires, carrying current to an electric lamp, insulated from each other, are accidentally brought into contact by their insulation being damaged, or by its having perished, and the result is a powerful current through the small wires supplying the electric lamps, which ignites any woodwork in the neighbourhood and starts a somewhat dangerous fire.

When a portable extinguisher is employed to put out such a fire, if the appliance is one arranged to deliver a stream of water on to the fire, there is great danger, in certain cases, of the operator of the appliance receiving a very severe shock, sometimes even a fatal one. In many districts alternating currents of 200 volts are now employed, and many individuals have been killed by coming accidentally in contact with a conductor carrying an alternating current at that pressure. The stream of water directed on to such a conductor would connect it with the metal vessel holding the liquid, and thence with the operator.

DETAILS OF POWDER EXTINGUISHERS.

The apparatus in which dry powder is employed is in the form of a cartridge. A long copper cylinder contains the powder, a cap being placed over the top, the cap having a loop by which the cartridge is suspended. The attachment of the cap to the cartridge is sufficiently strong to support its weight under ordinary conditions. In case of fire, however, instructions are given to seize the metal cylinder firmly with both hands, pull it down from the hook that is supporting it, wrench off the cap in so doing, and then to direct the powder quickly and sharply on to the seat of the fire. The powder contains chemicals which are inert as they lie in the cartridge, but when shaken violently on to the heated mass, combine and in so doing generate a quantity of gas which arrests combustion.

CHEMICAL JET APPLIANCES.

There are a number of these on the market, all constructed on very much the same lines. There is an outer containing vessel of copper, with a certain quantity of water, having bicarbonate of soda in solution. There is also a vessel containing a certain quantity of sulphuric acid. Under ordinary circumstances the solution of bicarbonate of soda and the sulphuric acid are kept carefully separated. When a fire occurs the two are brought quickly into connection, the result being the generation of a large quantity of carbonic acid gas, and the creation of a pressure which forces out a stream of water charged with the gas and with the sulphate of soda, which are formed by the chemical reaction between the sulphuric acid and the bicarbonate.

The chemical jet extinguishers are manufactured in various forms, to be carried on the back by the aid of straps, to be carried in one hand by a handle, and in slightly larger form to be carried on wheels. In all cases a nozzle is provided, and a short length of hose, so arranged that the operator can easily and quickly direct the stream of charged water on to the fire.

The mixing of the sulphuric acid and bicarbonate of soda is accomplished in different ways. In one form the sulphuric acid is contained in a bottle, held in a cage near the top of the vessel, and a metal plunger is provided, upon which a smart blow is given with any convenient instrument, the bottle being broken, and its contents precipitated into the solution of bicarbonate of soda below. In another form, the containing vessel is inverted, and is provided with a substantial ring, standing on what is the top when the apparatus is not in use, and serving to support the whole vessel when in operation. In another form, syphons similar to those used for mineral waters have a sparklet attached which gives a stream of water charged with carbonic acid only. It is claimed that, in addition to the throttling action of the carbonic acid, the sulphate of soda coats the burning mass, and very largely assists in preventing further combustion.

WATER APPLIANCES.

The appliances in which water only is used consist of vessels of various forms, sometimes arranged to be carried by hand and sometimes on wheels, all of them fitted with a small pump and a nozzle and short piece of hose. In the hand forms, the foot holds the apparatus in place, while one hand directs the nozzle and the other works the pump. A useful addition to this, arranged by Messrs. Merryweather, is a small electric motor, which can take current from the electric lighting service by plugging a connection on the wall.

(To be continued.)

ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.

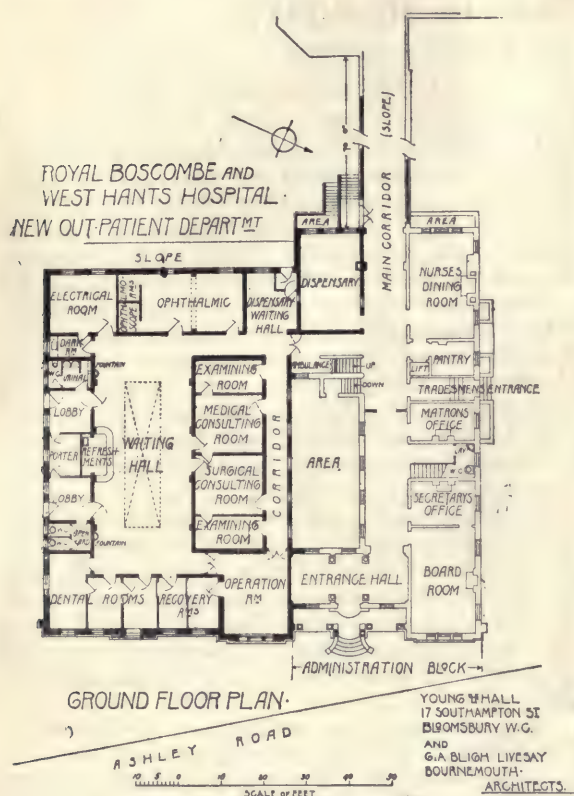
For some years the work of this hospital has been carried on in buildings partly old and partly new, the new buildings being wards and their appurtenant offices and admirably fitted for their work, while the old building

patient department. This building, while complete in itself so far as the department is concerned, will ultimately form part of a larger building, in which the resident medical staff, the matron, and the kitchen offices will be housed; while it is hoped at some future time to erect at the south side of the entrance for out-patients a suitable Nurses' Home.

The entrance for out-patients is on the south side, and is approached by a carriage-road from Ashley Road. Eventually a covered shelter will be erected protecting both entrances, and also connecting the Nurses' Home with the out-patient department, and so with the wards. There are two separate entrances—one for male, the other for female patients—and between them is placed the porter's entrance, which communicates by both doors and small windows with each entrance. Inside the porter's office is the main switchboard for the electric light, every point of which is thus under his control. Communicating with each lobby are the necessary sanitary offices, which are cut off from the rest of the building by open yards. From the lobbies patients pass into the large waiting-hall, around which are arranged the various consulting-rooms, etc.

At the south end of the waiting-hall is a refreshment bar. The medical and surgical rooms, each with their examining-rooms attached, are on the north side, and a passage at the back of these leads to the operation-room on the one hand and to the medicine waiting-room on the other, so that patients from these rooms do not pass back into the waiting-hall. On the east side are three rooms for dental surgery and mechanical work, two recovery-rooms and the operation-room. On the west side is the electrical room and the ophthalmic room. This room is also used for the ear and throat department. It is provided with two dark-rooms. A small waiting-room for medicine adjoins the dispensary, and out of this is the exit lobby for patients. The dispensary is arranged to serve both in-patients and out-patients.

The walls generally inside have a dado of white glazed brick with a green line above, and are finished above with Keene's cement and Hall's sanitary paint. The floors are of marble terrazzo throughout. The new buildings have been designed and carried out under the supervision of Messrs. Young and Hall, of London, and Mr. G. A. Bligh Livesay, of Bournemouth.



provided inadequately for the staff, the administrative offices, and the out-patient work.

The ground-floor plan which we publish to-day shows the beginning that has been made towards the gradual removal of this inconvenient state of things by providing an ample and suitably equipped building for the work of the out-

NEW APPLIANCES AND THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

SCHERING'S MEDINAL.

(LONDON AGENT: A. AND M. ZIMMERMANN, 3 Lloyd's Avenue, E.C.)

THE extensive use of veronal or diethylbarbituric acid has naturally led the manufacturers of synthetic remedies to try to improve upon this most useful hypnotic. Veronal, as all know who have used it, is insoluble. This means, pharmacologically, that both its absorption and elimination will probably be slow.

Clinical experience has shown, not so much that the onset of sleep is slow, as that the complete effects of veronal require some time to disappear: in other words, that the patient does not always pass rapidly from a restful sleep to a refreshed wakefulness, but that a period,

more or less long, of drowsiness is apt to intervene between these two states.

The drug before us is the mono-sodium salt of diethylbarbituric acid, and it is soluble in water to the extent of 20 per cent. in the cold. Hence it is rapidly absorbed and rapidly eliminated, and is as suitable for administration by the rectum as by the mouth. It should be given by the stomach preferably three hours after the last meal, in doses of from 5 to 15 grains, previously dissolved in a wine-glassful of water. For rectal use $7\frac{1}{2}$ grains should be given dissolved in about $1\frac{1}{2}$ drachms of water. It may also be given hypodermically, in doses of from $7\frac{1}{2}$ grains, dissolved in 1 drachm of water. Clinical experience has shown the efficacy of this drug, which may strengthen the hand of the physician in dealing with certain cases of insomnia.

NEWS AND COMING EVENTS.

THE Council for the Promotion of the Higher Training of Midwives held its annual meeting of subscribers and friends at The Deanery, St. Paul's, on Tuesday, May 25, at 3.15 P.M., when the chair was taken by Lady George Hamilton. The Venerable Archdeacon of Lewisham moved the adoption of the report of the Home for Mothers and Babies for the past year, and Miss Jane Walker, M.D., and Miss Alice Gregory each addressed the company.

THE National Society for the Prevention of Cruelty to Children (incorporated by Royal Charter) will hold a great meeting in the Mansion House, London, on Monday, May 24, at 3.30 P.M., when the Right Hon. the Lord Mayor will preside, and the speakers will include the Earl of Ancaster, Lord Alverstone (Lord Chief Justice of England), the Right Hon. Herbert Samuel, M.P., Sir Francis Channing, Bart., M.P., the Bishop of Kensington, and the Rev. Father Bernard Vaughan, S.J.

THE annual dinner of the West London Postgraduate College and past and present members of the West London Hospital, Hammersmith Road, will be held on Wednesday, June 16, at the Trocadero Restaurant, Piccadilly Circus, W., at 7 P.M. for 7.30 P.M. The chair will be taken by P. S. Abraham, Esq., M.D., F.R.C.S.I., dermatologist to the West London Hospital. The price of the dinner ticket is 7s. 6d. (exclusive of wine). All past and present members of the college and hospital are invited to attend, and tickets may be obtained upon applying to the Hon. Secretary, Mr. L. A. Bidwell, F.R.C.S., Dean of the College.

THE festival dinner in aid of the Metropolitan Hospital, Kingsland Road, N.E., was held at the Whitehall Rooms on May 21 under the presidency of Lord Duncannon. The Chairman reminded his hearers that the institution was not only poor, but also in a poor district. With an average expenditure of £14,000, the assured income from investments barely exceeds £500. Of the 113 beds in the hospital, on an average 105 were in constant occupation during the past year. This year the hospital is faced with the need for extensive repairs to bring it up to modern requirements. These will cost about £8,000, and an isolation ward and a new nurses' home are needed. Upwards of £4,850 was subscribed during the evening.

THE Incorporated Liverpool School of Tropical Medicine announces that instruction is given in tropical medicine for the diploma in that subject granted by the University of Liverpool, and that the period of instruction is three months. Two courses are held annually from January 6 to April 5 and from September 15 to December 13 respectively. In the summer there is also a short course from June 1 to June 30. At the end of the latter an examination is held and a certificate of attendance is granted to those who pass the examination. This certificate excuses holders from attendance during the first four weeks of the full Lent and autumn courses, one of which is necessary for the diploma. The short course, consisting entirely of practical and clinical laboratory work given at the University laboratory and at the Royal Southern Hospital, is especially designed for medical men at home on leave who have not time to attend the full course for the diploma. The fee for the course is 4 guineas, and applications should be sent to the Dean of the Medical Faculty of the University of Liverpool.

THE opening ceremony of the Berlin Tuberculosis Congress took place in that city on Saturday, May 22, when Dr. von Bethmann-Hollweg, Imperial Secretary of State for the Interior, delivered an Inaugural Oration, which dealt principally with the growth and development of institutions for experimental research into the problems connected with the fight against tuberculosis.

A CONFERENCE arranged by the Invalid Children's Aid Association will be held at Denison House on June 22 and 23. At the four sessions of the conference the chair will be taken by the Duchess of Sutherland, Lord Aberdeen, Dr. Arthur Latham, and Dr. Loch. Programmes, tickets, and other information can be obtained of the Secretary, Invalid Children's Aid Association, 69 Denison House, 296 Vauxhall Bridge Road, Westminster, S.W.

THE forty-first annual meeting of the Queen's Hospital for Children, Hackney Road, was held at the hospital on May 24, under the chairmanship of Lord William Cecil. The annual report shows that the work of the hospital has increased materially, over 1,700 in-patients and 31,000 out-patients having received treatment. Expenditure, however, exceeded income by £1,300, which, added to an adverse balance in 1907 of £2,100 as well as the £11,000 required for the upkeep of the institution during the present year, throws a heavy responsibility upon the management. King Edward's and the Hospital Sunday and Saturday Funds in recognition of good and economical administration have increased their grants, and the committee appealed with confidence to the public to provide the assistance which is so urgently needed. The committee will be reluctantly compelled to close half the wards unless a strong helping hand is given.

MR. HOWARD MARSH, M.C., F.R.C.S., Professor of Surgery in the University of Cambridge and the Master of Downing College, presided at the Annual Dinner of the Medical Graduates College and Polyclinic held at the Trocadero Restaurant last week, and was supported among others by Sir W. Church, Sir D. MacAlister, Sir J. Hutchinson, Sir A. H. Keogh, Inspector-General J. Porter, Mr. Bland Sutton, the Master of the Society of Apothecaries, Dr. Fletcher Little, Dr. Theodore Williams, Dr. A. Newsholme, and Dr. T. N. Kelyack. The Chairman said that the Polyclinic had to do pioneer work in providing information for those who had not the time to obtain it for themselves. Polyclinics by the extension through their efforts of improved methods and recent knowledge to medical practitioners in private or public practice are really charitable institutions conducted on the soundest possible lines. Sir Jonathan Hutchinson, F.R.C.S., in support of the Polyclinic movement, pointed out that education does not stop at school or college, but is a lifelong process, which in a sense only begins when the diploma is taken. Dr. C. O. Hawthorne said that the administrator of a polyclinic must display an even greater variety of capacity than was needed in the administrator of a lunatic asylum. He then presented to Captain A. E. Hayward Pinch, F.R.C.S., late Medical Superintendent of the College and now Director of the Radium Institute, a cheque for a hundred guineas and an illustrated address, signed by many leading physicians and surgeons and friends, testifying to the zeal, ability, and judgment with which Captain Pinch during his ten years of office served the interests of the College.

DR. WILLIAM ENGELMANN, Professor of Physiology in the University of Berlin and distinguished for his researches into the neuro-muscular mechanism of the heart, died on May 20, at Berlin, at the age of sixty-five. Professor Engelmann was professor at Utrecht before his removal to Berlin.

THE National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen Square, Bloomsbury, W.C., which was founded in 1859, and therefore celebrates its jubilee this year, will hold a festival dinner, with the Right Hon. the Lord Mayor in the chair, on Thursday, June 10, at the Mansion House, at 7 for 7.30 p.m.

At the annual meeting of the Hospital Officers' Association, held at the Gaiety Hotel on May 20, Mr. H. W. Burleigh, Secretary of the Hospital for Epilepsy and Paralysis, etc., Maida Vale, W., was presented with a silver tea and coffee service by members of the Association upon his resignation as editor of the *Hospital Gazette*, and in recognition of his services as such for the past five years.

THE GENERAL MEDICAL COUNCIL.

THE 89th session of the General Medical Council opened on Tuesday, May 25, at the offices in Oxford Street, with Sir Donald Macalister, K.C.B., M.D., the president, in the chair. Dr. Frederick Taylor, as representative of the University of London, in succession to Dr. Pye-Smith, resigned; and Dr. David Knox, as representative of the Faculty of Physicians and Surgeons of Glasgow, in succession to the late Dr. Lindsay Steven, were introduced, and took their seats on the Council.

The President's Opening Address referred to the representations which had been made by him to the Government, through the Lord President of the Privy Council, on various matters regarding which resolutions were passed in November. In accordance with the Lord President's decision to make preliminary inquiries on the subject of the appointment of a Royal Commission to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons, a circular has been issued to medical officers of health asking for information as to the extent of the practice and its effects on the general health in their districts. The President referred to the Council's resolution of November 28 respecting the General Anæsthetics Bill, 1908, which he has forwarded to the Government departments concerned. The resolution supported the proposed restriction of general anæsthesia to qualified medical practitioners. The Council will be called on to consider whether, apart from the saving to existing dentists of their customary practice, it would be in the public interest to confer in future on dentists without medical qualification express legal authority to administer general anæsthetics for dental operations. Since without skilled attention to the state of the patient's health no general anæsthetic is invariably "safe," and in dental practice the anæsthetist is often the operator also, the proposal contained in the Bills referred to is not without some justification in the public interest. In reply to the Registrar's inquiry as to the degree in which effect had been given by the licensing bodies to the Council's recommendation—that candidates for medical qualifications should be required to produce evidence of having received practical instruction in the administration of anæsthetics, nearly all the licensing bodies state that this requirement has already, or will in future be, enforced. The Council

considers itself thus justified in its contention that fresh legislation to this end, which to be effective must be penal in character, is neither expedient nor necessary at the present time. The British Dental Association was also referred to in the Address, and also the Draft Charter of the British Medical Association. Some of the powers asked for by the Association appear at first sight to trench on the statutory functions of the Council, and will therefore need careful consideration.

Dr. Langley Browne moved "That representations be made to the Privy Council that it is expedient to confer on the registered practitioners resident in England and Wales the power of returning an additional member to the General Council." He said that the number of registered medical practitioners in England and Wales was 25,168, in Scotland 3,845, and in Ireland 2,658. England and Wales between them had only three direct representatives, and Scotland and Ireland had one each. Dr. McManus seconded the motion, which was adopted, with the following rider:—"That it be a further representation to the Privy Council that the addition in question be not made until the next general election of direct representatives."

Sir Thomas Myles, a member of the Council, was appointed an assistant examiner in surgery to the Apothecaries' Hall, Dublin, for a period of four years, in lieu of Sir Lambert Ormsby, who retires by rotation, his term having expired.

BEQUESTS AND DONATIONS.

THE Goldsmiths' Company has sent £50 to the British Lying-in Hospital, Endell Street, W.C., which is in great need of assistance, to reduce the debt due to the bankers.

THE Treasurers of the Middlesex Hospital have received from the Salters' Company the half-yearly instalment of £50 for the maintenance of the scholarship attached to the cancer research laboratories of the hospital.

LORD SANDHURST, Treasurer of St. Bartholomew's Hospital, has received from Mr. H. J. Waring, F.R.C.S., Senior Assistant-Surgeon, a donation of fifty guineas towards the new pathological block.

DR. JAMES HURD KEELING, M.D., F.R.C.S., of Sheffield, who died last March, aged 77, left estate of the gross value of £11,480, and bequeathed £250 each to the Jessop Hospital for Women, Sheffield, and the Sheffield University.

MR. JOHN SMITH, of Monifieth, Forfarshire, merchant, left £2,000 to the Dundee Royal Infirmary, £1,000 to the Dundee Royal Victoria Hospital for Incurables, and £500 to the Gerard Cottage Hospital, Monifieth.

THE late Mr. Frederick Gorringe, chairman of Messrs. F. Gorringe, Ltd., left £5,000 to the Bolingbroke Hospital, Wandsworth Common, and the residue of his estate, which will amount to about £400,000, is to be divided equally among the Westminster Hospital, St. George's Hospital, and six other charitable institutions.

ALDERMAN WILLIAM ROBINSON, of Salford, Lancashire, who died on March 29, aged seventy-one, left remainder of £10,000, on the decease or remarriage of his niece, of £5,000, to the Salford Royal Hospital, Salford; £2,000 to the General Hospital and Dispensary for Sick Children, Pendlebury; and a sum, estimated at £2,000, to the Salford Royal Hospital, Salford.

MR. EDWIN GAYFORD, of Piccadilly, has bequeathed £1,000 to the Hospital Sunday Fund.

NURSING ADMINISTRATION.

TRAINING SCHOOLS AND PRIVATE NURSING.

It is remarkable that although nine-tenths of the nurses trained in hospitals become, for some part of their career at any rate, private nurses, no part of the curriculum of the training-school is directed to fitting them for the special duties and difficulties of private nursing. The reason for this is not far to seek. The training of a nurse is conducted exclusively by sisters who have themselves had no experience whatever in this branch of work. It is supervised by a matron who has in all probability never taken a private case, and the problems which will engage the nurse on leaving hospital are a sealed book to her superiors as well as to herself. Do not the hospitals owe a duty to the public in this connection? The service rendered by hospitals in fitting women to undertake the nursing of patients in private life is often brought forward as a reason for generous support, and it is just that this should be so. Every institution to which a good training school for nurses is attached can point to large expenditure incurred, quite beyond the immediate needs of the wards, in order to make the training of nurses entirely efficient.

In many establishments the number of probationers is maintained at a figure greatly in excess of requirements, expressly that as many women as possible may be afforded the necessary training. But having gone so far, is it not incumbent on hospital authorities to go a little farther? At present the trained nurse leaves the wards confessedly very ill-prepared for the widely different duties which await her in the sick-room, and unless she have exceptionally quick wits and power of adaptability her deficiencies are instantly exposed. Even in the actual services to be performed for the patient, constituting what may be called nursing proper, she is likely to go astray, and nearly all the complaints which are freely levelled against private nurses may be referred back to a hospital attitude towards the patient, entirely out of place in private practice. The patients in hospital are not so much individuals as part of a large scheme. With the utmost consideration and the tenderest humanity among those who care for them, it is evident that the patients' idiosyncrasies can be allowed little play. Things which have to be done for them are done when it is convenient for the common good of the ward, and are necessarily performed at lightning speed—the efficiency of a hospital nurse being measured by her rapidity of action. All this is quite out of place in a private room where the attentions of the nurse are concentrated on one patient, and where an atmosphere of haste is highly offensive. In hospital the nurse is the patient's superior; she assumes command, and either controls with a high hand, or talks down to those on whom she waits. She acquires either an impassive manner born of concealed hurry, or what is known as the "dearie" manner, and both are about equally distasteful to many people, who see no reason why the fact of

being ill should reduce them to be treated like knaves or fools. Again, it is quite true that probationers during their time of training are entirely excluded from the outside world, and this, as Dr. Jane Walker recently observed, has a bad effect upon them as private nurses. It frequently happens that prior to entering hospital they have had no experience of other people's houses, and it is not surprising that, plunged without preparation into unfamiliar surroundings, varying from a public-house to a ducal mansion, they should be guilty of blunders which serve as material against nurses in general. Lastly, the relations between doctor and nurse in private practice and in the hospital ward differ often very widely. Nurses are bound to the very strictest observance of an etiquette which has never been properly defined to them, and offend usually because the circumstances in which they find themselves are outside their experience. In all these aspects of private work the nurse sins more often in ignorance than in intention. There is little doubt that it is the defective preparation received in her training school which is answerable for much which renders her unpopular in the outside world.

It is time that the heads of training schools began to recognise distinctions in the work for which they are training probationers. If during the first two years the training can run on even lines, the basis of a nurse's training being the same whatever line she may subsequently take up, it is beginning to be perceived that during the last year or two years she should be encouraged to choose her future career and begin seriously to qualify for it. The private nurse will not need to make herself proficient in all the subjects necessary to a future matron. But she has special trials ahead of her, and it is not creditable to the training school which certificates her if she is found unprepared to meet them. Very few hospital sisters, as we have said, are qualified to instruct nurses as to their duties in private sick-rooms, or to give them a rule of conduct in other people's houses small and large. But it should not be difficult to procure one member of the staff experienced in the ways of the world, and in the problems of private nursing, who could lecture to those among the third or fourth year probationers who had expressed their intention of becoming private nurses, and the very fact of a regular course of study directed to this end would introduce a new spirit among the nurses thus instructed. There is no doubt that paying wards would greatly help out such a course, though they cannot obviate the necessity for it. There is a whole code of conduct necessary to be mastered by the woman who intends to make a success in private nursing, and the hospital which will initiate a course of this nature will confer a benefit not merely on its own probationers and their future patients, but on the nursing world, which suffers deeply in reputation from the errors of uninstructed women.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, MAY 31 TO JUNE 5.

ROYAL SOCIETY OF MEDICINE, 25 Hanover Square, W.

At 5 p.m.

June 4, Laryngological Section, Cases and Specimens.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

June 1, Dr. G. P. Chappell, Demonstration of Selected Medical Cases.

THE THROAT HOSPITAL, Golden Square, W.

At 5.30 p.m.

June 3, Mr. Faulder, Surgical Anatomy of the Tympanum, Labyrinth, and Mastoid.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

June 4, Mr. Sargent, Decompressive Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich, S.E.

At 3.15 p.m.

June 1, Mr. Carless, Fractures in the Region of the Wrist, and their Treatment.

At 2.15 p.m.

June 2, Dr. F. Taylor, Myelitis.

At 2.30 p.m.

June 3, Dr. Rankin, The Neurotic Element in Disease.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

June 3, Surgical Registrar, Demonstration.

June 4, Medical Registrar, Demonstration.

At 12.15 p.m.

June 1, Dr. Pritchard, Practical Medicine.

June 2 and 5, Dr. Grainger Stewart, Practical Medicine.

At 5 p.m.

June 1, Dr. Saunders, Clinical Lecture, with Cases.

June 2, Dr. Beddard, Medicine.

June 3, Dr. Cole, Acute Mania and its Treatment.

June 4, Dr. Pritchard, Infective Endocarditis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

June 1, Dr. C. O. Hawthorne, Medical.

June 2, Mr. Edred Corner, Surgical.

June 3, Sir Jonathan Hutchinson, Surgical.

June 4, Mr. Harold Barwell, Ear, Nose, and Throat.

At 5.15 p.m.

June 1, Mr. Herbert Eason, The Pupil in Disease.

June 2, Dr. Charles Mercier, The Diagnosis of General Paralysis in its Early Stage.

June 3, Dr. Essex Wynter, Treatment of Chorea.

EDITOR'S LETTER-BOX.

"THE CAUSATION OF SEX."

To the Editor of THE HOSPITAL.

SIR,—Dr. Rumley Dawson seems to be angry with me for agreeing with him about his tendency to reiteration. I should like to say that I see no reason for not stating my opinion whether it is in accordance with his anticipatory preface or not. Because a man says in his preface that his book is badly written owing to his ignorance of English, a reviewer is not prevented thereby from saying that the book is badly written. With regard to my suggestion about right-handedness and the development of the right ovary, I think it is clear that Dr. Rumley Daw-

son certainly made an omission in not mentioning the possibility, if only to disprove it. If the facts are as he states, in the case of the left kidney in women and the right testicle in men, my suggestion, which was at the time tentative, is clearly untenable in the form in which it was stated. To take another point, I think that in one or two cases of unilateral ovariectomy, Dr. Dawson explained the birth of a child not of the expected sex, by supposing that ovariectomy was not complete and that some ovarian tissue must have been left. This seems to me to require considerably more evidence than is offered by Dr. Dawson.

Again, as I said before, greater volume does not necessarily imply greater density in the matter of ova.

The exclusion of birds from the argument is not unjustifiable, owing to their high specialisation, as he rightly says, though his observations about the use of analogy and the question of their circulatory system are quite irrelevant. But it does not seem clear why men should be different, in the matter of sex causation, from other mammals in whom two ovaries are present. To establish his theory, Dr. Dawson should certainly have produced evidence from the lower mammals.

It seems to me, too, that size of ovary has nothing whatever to do with the reason for the greater production of boys. On Dr. Dawson's hypothesis, the ova are discharged alternately at menstruation from the ovaries, and unless there are less than 250 in the left ovary, the sexes will be equally distributed until the menopause, and preponderance of males will depend merely upon fortuitous choice of time for impregnation.

Yours faithfully,

THE REVIEWER.

AUSTRALIA FOR THE SONS OF MEDICAL MEN.

To the Editor of THE HOSPITAL.

SIR,—Some time ago you were so good as to allow me to call attention in your columns to the opportunities which life on the land in Australia offered to lads and young men, and to point out what excellent avenues to this the various Government Agricultural Colleges were. At these institutions an admirable training in scientific and practical agriculture in all its branches can be obtained at a cost of from £20 to £30 a year, including first-class board and lodging. After finishing the course, fertile land in a district of good rainfall can be obtained on reasonable terms for either sheep, wheat, dairying, fruit growing, or mixed farming. As a result of this many doctors wrote to me, and some have already sent out their sons. I am at present in London and will be glad to correspond with any others, or arrange an interview with them. I have visited most of these colleges myself, and so can speak from experience. I hope to make arrangements for a lantern lecture on the Australian agricultural colleges, to be given at Belfast when the British Medical Association is meeting there, and to be present myself, to see any medical men who may desire further information. My address for the next two months will be the Royal Colonial Institute, Northumberland Avenue, W.C.

I am, yours truly,

RICHARD ARTHUR, M.D.,

President Immigration League of Australasia.

THE HOSPITAL

May 29, 1909.

Name

Address

This Coupon must accompany manuscript or contributions intended for THE HOSPITAL.

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 118, VOL. V. [No. 1190, VOL. XLVI.]

SATURDAY, JUNE 5, 1909.

THE VIA MEDIA OF DIETETICS.

It is a maxim that the curability of any given disorder stands in an inverse ratio to the number of its "cures." This is natural. No one, having witnessed the effect of quinine upon malaria, is particularly concerned to continue experiments with other drugs. Conversely inveterate diseases have a large following of "cures," for human hopefulness is, fortunately, as inveterate as the least amenable of maladies, and stimulates humanity to the perpetual exploiting of possible remedies, often enough against the dictates of reason. These observations apply both to sufferers from the organic maladies whose consideration fills the pages of text-books on medicine, and to the immense class of persons who labour not so much under disease as dis-ease. These last are not technically sick in so far as their bodily functions are tolerably well discharged, though not without unaccountable vagaries from day to day—vagaries in themselves insignificant, yet in sum substantial enough to discount enjoyment of life while not jeopardising physical existence. Their complaint is rather of unexplained dis-ease, lack of placidity, absence of the *joie de vivre* which is the high prerogative of healthy youth, and is seen at its best in the explosive hilarity of a six-months' puppy.

This is a venerable disability. How venerable may be judged from the immense literature of the philosophies which deal with it and endeavour to point the way to those who are lost in its mazes. Here is Epicurus on the subject: "There are two good things of which our highest good or chiefest felicity doth consist, viz. to have the mind free from perturbation and the body free from pain; and so that these goods be full and above the capacity of increase. For how can that which is full be increased? If the body be immune from all pain, what addition can be made to that indolency? If the mind be constantly serene and imperturbed, what addition can be made to that tranquillity? Now, seeing that this tranquillity of mind and indolency of body do constitute the chief felicity of man, nothing can more concern us than to consider those things which conduce to the attainment and conservation thereof: inasmuch as while we have that we have all things; and while we want it, all we do is to attain it, though, for the causes aforesaid, we seldom do attain it."

Certainly in this particular humanity has not changed much in the last two thousand years. There are still thousands of men and women beneath the sun searching for this "indolency" (in the archaic sense) of body, and tranquillity of mind so highly rated by Epicurus.

The paths along which such victims seek to achieve their liberty are, like the manifestations of their dis-ease, legion. Having traversed the pharmacopoeia in vain, and Harley Street without advantage, they are ripe—and small blame to them—for the missionaries of any cult which still enables them to nurse hope of relief; and it is a matter partly of chance, partly of temperament, whether in the next step of their evolution they enter the ranks of theosophy, food-faddism, Christian Science, homeopathy, or some other competing creed. We are concerned for the moment with food-fads, our text being some lectures upon *Parcimony in Nutrition*, delivered by Sir James Crichton-Browne last year, and now issued in book form.*

It may, we think, be taken for granted that so long as bodily and mental health remain unimpaired—that is, so long as a man continues to be unconscious of the machinery of his daily life—he cares little what he eats and drinks, but follows the invitations of his appetite, in so far as they consort with his pocket, ungrudgingly and with a light heart. Therefore the fact that a man begins to be curious about his diet is good evidence that all is not well with his mechanism (excluding, perhaps the small class of people who diet themselves from fears of obesity and for their figures' sake alone). We are met, then, with an army of people suffering in a fashion little or not at all accounted of in works on medicine, folks who are constantly on the look-out for some explanation of the dis-ease within them, and who in their search after knowledge learn early that there are such things as malignant metabolic poisons. For does not every penny print assure them in ominous terms that this, that, and the other symptom is one of the metabolic poisons whose head is Uric Acid? Thus primed they probe further and derive, from an ample literature, a knowledge of

* "*Parcimony in Nutrition*," by Sir James Crichton-Browne. Funk and Wagnalls, London and New York. 1909. Pp. 111. 5s.

the virtues of vegetarianism, Fletcherism, and the like. Forthwith they undertake the enterprise, and, commonly, with some temporary success. The detached observer may ask himself the reason of this advantage, which, though transient as a rule, must, we think, be admitted an existence. The probable explanation is that the change of diet acts for a while after the fashion of that vague but important therapeutic item, an alternative, the body after becoming "stale" with monotony being benefited by the change of diet. However, it be, there is no doubt that the passing advantage often attending the assumption of a dietetic fad has produced a school of dieticians whose motto is parsimony in nutrition, a school confirmed in their beliefs by the researches of Chittenden upon

the blessings of a diet falling far short of what custom and inclination have prescribed. Sir James Crichton-Browne, in the lectures to which we refer, enters a caution against the too ready acceptance of these experimental studies as a guide for practical living. His book repays perusal, for it is balanced and sane. On the whole, he is of Bacon's opinion: "Celsus could never have spoken it as a physician had he not been a wise man withal, when he giveth it for one of the great precepts of health and lasting, that a man do vary and interchange contraries, but with an inclination to the more benign extreme: use fasting and full eating, but rather full eating; watching and sleep, but rather sleep; sitting and exercise, but rather exercise, and the like. So shall Nature be cherished and yet taught masteries."

THE LOCAL GOVERNMENT BOARD AND UNQUALIFIED PRACTICE.

A CIRCULAR has recently been issued from the Local Government Board offices to medical officers of health on the subject of unqualified practice. The President of the Board is desirous of obtaining definite information on the points raised by the resolution adopted by the General Medical Council calling for a Royal Commission to investigate the evils produced by the unrestricted practice of unqualified persons; and in this circular he asks for replies to two specific questions. First, whether unqualified practice is increasing in the M.O.H.'s district; secondly, the effects of such practice on the public health. We notice that a correspondent of the *British Medical Journal*, who received one of these circulars, filled it up by saying that there is no unqualified practice in his district except that of chemists, who both prescribe for illnesses and also treat injuries by the application of dressings, etc. He added that he has known cases in which the delay thus caused has been not only serious, but even fatal.

Now this correspondent clearly shows that the practice of what is called "counter prescribing" on the part of chemists is in his opinion the most dangerous or at least the most prevalent form of unqualified medical practice in his neighbourhood. Whether he is a "whole time" or "part time" medical officer of health is not stated; but this point is one which the defenders of "counter prescribing" (whose views are often to be read in their trade journals) are likely to raise. For if this particular M.O.H. should be known to be engaged in general dispensing practice as well as in the public health service, the imputation of bias may be cast at him, and the old excuse and challenge of the prescribing chemist "when you stop selling medicines I will stop treating patients," may be heard again in the pharmaceutical press. This question of illicit practice in medicine and surgery, which in some quarters is conducted on a large scale, and in others is only

carried on in a small way—but is very widespread indeed—has long been a grievance with the medical profession and has long been recognised by it as a source of danger to the public. All authorities are agreed that the thing is wrong and should be stopped; but not all are agreed as to the position in order of wickedness and in possibility of reform which it should occupy among the methods of unqualified practice; and many do not realise the pressure which the public, and not only its lower classes, continually brings to bear upon the chemist in order to induce him to play the part of apothecary, surgeon and physician.

The President of the Local Government Board would be well advised to read through the three-column advertisement of Mr. H. A. Barker, the bonesetter, in the *Daily Mail* of May 24. It should be added that he would do well to have this extraordinary "open letter to the President of the College of Surgeons" annotated by some surgeon of acknowledged standing; for it is, on the face of it, so extremely plausible that, without expert comment, the fallacies which it contains may pass unchallenged. We have on previous occasions lamented the indifference of newspaper proprietors to any consideration of the public weal in dealing with quacks and patent medicine advertisements. If on this occasion we have seemed to err in giving further gratuitous prominence to them, it is because we have good proof how profitable this particular form of practice must be, for a three-column advertisement in the *Daily Mail* is a somewhat expensive luxury. In our issue of February 6, 1909 (p. 475) we mentioned the very wholesome provisions of the recent legislation in New Zealand on the subject of such advertisements; it is high time that something similar were done here, and we wish the General Medical Council all success in their efforts to promote the public well-being in this matter.

ANNOTATIONS.

Medicine at Oxford University.

THE very active sympathy which the Chancellor of Oxford University, Lord Curzon, displays towards the medical school of that seat of learning is both gratifying to the medical profession and a most noteworthy proof of the statesmanlike breadth of view which the late Viceroy of India is now confidently trusted to exhibit towards important questions of public policy. Only a score or two of years ago an Oxford Chancellor whose studies had been classical would have as soon been expected to concern himself with the advancement of the scientific and medical faculties as to attend the dinner of the Oxford Graduates' Medical Club; yet Lord Curzon has done both, and his speech to the members of the latter shows how keenly alive he is to the necessities of the former. Fifty years ago, we gather, the Oxford Medical School practically had no existence; to-day it supplies sixty-eight members of the teaching staffs of hospitals to which medical schools are attached or of Universities. Among the schemes of internal reformation which are engaging the most serious consideration of the authorities of the University, the encouragement and extension of the medical school are very prominent. No longer can it be said with the least shadow of justification what Lord Curzon said of Oxford generally in the middle of the nineteenth century, that the condition of science there might almost be compared with that of the Dark Ages, and that the attitude towards medical science in particular and science in general was one of suspicion if not of active hostility. In 1850 there was not a single scientific laboratory in Oxford: bearing this fact in mind, and the Chancellor's speech as well, it may be confidently hoped that the wonderful progress made since then is only a foretaste of that which will be accomplished before fifty-nine more years have rolled away.

The Spirit Duty.

SINCE the first introduction of the Budget the effect of the increase of the proposed duty of an extra three shillings and ninepence per gallon of spirit upon the price of chloroform, tinctures, and other pharmaceutical preparations has been widely discussed. The result of the various expressions of opinion by physicians, pharmacists, and other interested persons was that a decidedly benevolent neutrality was evinced by the Chancellor of the Exchequer towards the exemption of spirit destined for such commercial purposes from the operation of the increase. As THE HOSPITAL went to press last week the probability of concession along these lines seemed particularly hopeful, but the text of the Finance Bill, as finally introduced, does not seem to contain any confirmation of these hopes. It has already been pointed out in these columns (May 8, p. 147) that chloroform and ether are neither the luxury of the idle rich nor the vice of the intemperate poor, but a necessity; and it now appears that the price of these drugs (or rather of those varieties of them made from dutiable spirit) will be raised at least tenpence a pound. Such an impost on an article which is to all intents a necessity of

life, and already pays about 250 per cent. duty *ad valorem*, is indefensible from any point of view—humanitarian, utilitarian, common-sense, or any other. It is notable that at an inquest held on May 21 on the body of a child which died at St. Bartholomew's Hospital, the Coroner elicited the fact that this extra duty would cost the hospital from £400 to £500 a year extra on the drug bills alone. Such a statement is one which should of itself suffice to convince the Chancellor—or, failing him, the House of Commons—of the absolutely immoral nature of the proposed taxation. We cannot believe that Mr. George will prove obdurate over this matter if it is properly pressed upon his attention; and it ought to be the especial business of the medical men in the House to secure some definite concession on so important a matter with the least possible delay.

The Medical Council's Finances.

IN our news columns last week we published an Abstract of the Presidential Address, delivered at the opening of the eighty-ninth session of the General Medical Council by Sir Donald Macalister; but, although several matters of general interest and importance were dealt with, we refrained from commenting upon them because they had already received the fullest consideration in recent numbers of THE HOSPITAL. Whilst the General Minutes afford little excuse for comment or criticism, the Report of the Finance Committee is full of material for thought. This year the Committee has to announce a deficit of more than £650, which comes as a shock after three years of large balances on the pleasant side of the ledger. The reasons for a heavy deficit are stated to be beyond the Council's control, and a study of the accounts tends to confirm this assertion. In the matter of receipts the three branches of the Council received £290 less from registration fees, original and additional, than in 1907, and of this £259 was due to the falling-off in Scotland. But it is in the expenses of the General Council that the principal cause of the adverse balance is to be found—here the fees were larger by £656, law expenses by £302, and miscellaneous expenses by £142. This was because the Council sat for thirteen days in 1908 as against eight days in 1907, and the extra length was entirely due to two penal cases. The sessions cost about £200 per diem in fees and hotel expenses; and these two cases, for the protraction of which the Council disclaims all responsibility, cost the Council £2,100. In the words of the Finance Committee's Report, the Council "must give a fair hearing to a practitioner charged with so grave an offence as 'infamous conduct in a professional respect'; but, when the case is unduly protracted, the financial results are disastrous." But for these two cases, instead of a deficit of £650 there would have been a surplus of £1,100. The Report does not emphasise the word "unduly"; but it will no doubt strike many of our readers that there lies the crux of the matter. Such an appalling waste of public (and professional) money must surely not be allowed to occur again.

MEDICAL OPINION AND MOVEMENT.

THERE is a very definite idea among the laity, and to some extent also among the medical profession, that accidents or sudden emotions sustained during Pregnancy may have a prejudicial effect upon the development of the fœtus, and may be responsible for arrests in development and malformations. The report of Dr. S. Rebaudi, therefore, upon 25 pregnant women who escaped from the Messina earthquake is not without interest. Of these 25 women one was confined prematurely at the seventh month, but she sustained a severe abdominal injury. Thrown down by some falling debris, she remained for three days with a heavy stone pressing upon the abdomen. Almost immediately afterwards she was delivered of a stillborn child. One other patient aborted a month and a half after the earthquake, but apparently this was due to an endometritis. All the others went to full term and were delivered of children in all respects healthy and normal. All these women, however, endured terrible physical and moral sufferings. Flight during the night, exposure to cold, grief for lost relatives, insufficient food and drink, and varying kinds of injuries, one patient sustaining a fracture of the leg. The author states that some of these women were extremely nervous and had previously experienced miscarriages. It would appear, therefore, from these experiences that only traumatic injuries directly or indirectly affecting the uterus are able to influence the course of pregnancy.

DR. G. J. MULLER, of Berlin, reports beneficial results from the administration of thiosinamine and sodium salicylate (fibrolysin) by intra-muscular injections in cases of Tabes Dorsalis. He happened to observe the effects of this drug upon the disease, although it was given for a different purpose. A tabetic patient was afflicted with paralysis of the bladder complicated with an indurated urethral stricture, dilatation of which presented considerable difficulty. Dr. Müller had resort to fibrolysin injections with the view of influencing the stricture, and to his surprise the injections were followed by amelioration of the vesical crises and complete disappearance of the lightning pains in the lower limbs. Since then he has tried these injections in eleven other cases of tabes. Of these, five have completely lost their lightning pains, and the other six, who are still under treatment, have so far improved that they have completely recovered their sleep. In one case severe gastric crises have disappeared, in another the same effect has been produced upon vesical and rectal crises, and, in a third, there was considerable improvement in laryngeal crises. The bladder has recovered its power in several cases, and micturition has become much easier. An improvement was also observed in the general condition, but this may be due to the absence of the pains and the return of sleep. No improvement was observed in the ataxia and other objective symptoms of the disease. The author injected every other day or every day one cubic centimetre of the following solution: Thiosinamine, 10 grammes;

glycerine, 10 grammes; sodium salicylate, 20 grammes; and aqua distill. ad 100 grammes. No phenomena of intoxication or other ill effects followed the injections.

DR. MAYGRIER, of "La Charité," claims special success in the Treatment of Eclampsia. With 37 cases during the last three years at this hospital, he has only had one death, giving a mortality of 2.7 per cent. The chief therapeutic means upon which he relies is Venesection. He recognises three chief indications for treatment: The patient is in a condition of intoxication, and means must be adopted to get rid as far as possible of the poison, arterial tension is raised and endeavours must be made to reduce it, and the kidneys are working inefficiently or not at all, and renal secretion must therefore be re-established. The first two indications are best met by venesection; but it must be thorough and abundant, to the extent of 1,000 grammes or more. As soon as a patient is admitted into the hospital and recognised to be eclamptic, she is bled. The amount varies according to conditions, but a fall of at least 10 or 12 centimetres of mercury is aimed at. The bleeding should be slow, lasting 20 to 30 minutes, and it should be repeated if the blood-pressure rises again or if there is a reappearance of the fits. After venesection a purgative (generally seidlitz powders) is administered, if necessary by the stomach-tube, and then rectal lavage of 20 to 30 litres. In cases of severe headache and repeated fits lumbar puncture may be resorted to. Every two or four hours a catheter is passed in order to control the progress of renal secretion. The basis of the treatment, however, is liberal venesection. In most cases, according to Dr. Maygrier, the fits cease after the first thorough bleeding; but if they recur, a second venesection suppresses them altogether.

IN an interesting article in the *American Journal of Surgery* Dr. Henry Mann Silver, of New York, draws attention to the surgical importance of a proper recognition of the visceral crises in the erythema group of skin diseases. Although these conditions are by no means common, failure to recognise them may lead to a faulty diagnosis of some abdominal lesion such as appendicitis or intussusception and consequent unnecessary surgical interference. To Professor Osler more than any other writer credit is due for calling the attention of the profession to this possible source of error, and he has collected 29 cases illustrating the subject. These cases may be divided into three chief groups: Quincke's disease, in which there is colic associated with angio-neurotic œdema; Henoch's purpura, in which there is arthritis combined with erythema or purpura and colic; and the third group consisting of recurring attacks of colic without the appearance of any skin lesion for a prolonged period, even years. Dr. Mann Silver reports several interesting cases in which operation has either been

performed, or has only just been avoided by the timely development of an arthritis or a skin lesion. In children, especially, with colic, the greatest care should be taken to get a full history, which may bring out the fact of previous attacks, either of skin lesions or arthritis or of intestinal crises, and a careful examination of the skin should be made for angio-neurotic cedema, purpura, or erythema. A differential blood count may also help in the diagnosis. In Henoch's purpura there is slight leucocytosis and a normal differential count. In intussusception and appendicitis there is a leucocytosis with increase in the polymorphonuclear cells.

AT a recent meeting of the New York State Medical Society, Dr. Whitman, whose name is well known in connection with orthopædic surgery, read a paper on his results in the treatment of cases of Fracture of the Neck of the Femur by Abduction. This, which is known on the Continent as the Morisani method, has already been very favourably reported upon by Bardenheuer of Cologne, and we believe we are correct in stating that it is the favourite method in use in German clinics. In England, notwithstanding the enthusiastic advocacy of Professor Ralph Thompson in last year's Hunterian Lectures, the method seems to be practically unknown. Whitman, in discussing the method, points out that hitherto the teaching with regard to the infrequency of perfect functional recovery in femoral neck fractures has been bolstered up by four main arguments: that the deficient blood supply explains non-union, even if the fragments are opposed; that these fractures are often the result of great violence, producing much shattering of bone; that correction of deformity, if the fragments are impacted, must not be undertaken; and, finally, that disorders of nutrition leading to bony atrophy often follow the injury. None of these objections holds in the majority of cases, and the author sums up the proper principles of treatment as follows: Immediate and complete reduction of deformity, no matter to what it may be due, and secure fixation until there is no longer any question of displacement. These conditions are often very difficult to obtain in the hip joint, and the author considers the abduction method gives the most satisfactory results in the majority of cases.

IT may be worth while here to describe the Morisani method as modified by Dr. Whitman: "The patient having been anæsthetised, the upper part of the trunk is placed on a box. The sacrum rests on a secure pelvic support, and each lower limb is held by an assistant in the extended position, so that the body is symmetrical, the pelvis level and perfectly balanced. The operator stands on the injured side, his hands supporting the thigh. The assistant, holding the sound limb in the extended position, abducts it to the normal limit, which is reached when the outer border of the neck comes into contact with the upper rim of the acetabulum. If the limb be held firmly in this position, the pelvis is fixed, the anterior superior spines lying in the same plane. At this moment the assistant, supporting the injured limb in slight flexion, rotates it inward to the normal attitude; then, under steady

traction, abducts it slowly, the operator meanwhile supporting and guiding the thigh and pressing downward on the trochanter, which should regain the normal relation to Nelaton's lines, when the deformity, under the combined influence of pressure, leverage, and traction, is corrected. When the limb has been abducted to the desired degree—preferably the normal limit as indicated by comparison with its fellow—a firm, well-fitting plaster spica is applied from the upper part of the thorax to the toes." In conclusion, the author gives the following warning: "The abduction treatment is not automatic. It must be used with discretion, and its proper application may require more skill and experience than the ordinary methods of routine. It simply enables one, as it were, to lay the foundation of success, which, as experience has now demonstrated, is no longer beyond the scope of surgical endeavour."

DR. CRILE'S interesting monograph on Hæmorrhage and Transfusion, which has lately been published by Appletons, will be of interest to both physicians and surgeons, and its practical value is unquestioned. Briefly stated, the author has reported an extensive series of experimental studies on the phenomena of hæmorrhage in man and the lower vertebrates, and the treatment of this condition, experimentally and clinically considered. Of all American surgeons, Dr. Crile has, perhaps, been the most enthusiastically energetic in testing his experimental results at the bedside—the only real and conclusive test of the practical value of laboratory methods—and his findings will therefore appeal to a large section whom mere laboratory conclusions may leave cold. Specially important in this connection is the careful elaboration of transfusion methods, and the sane comparison of their clinical value. Those interested in the more theoretical study of tumour relations will find the chapters dealing with the work of Beebe, who noted remarkable retrogressions in animal tumours in cases experimentally transfused with normal blood, of much value, and especially so since negative as well as positive findings are equally faithfully set down. Crile has found transfusion of decided benefit in cases of hæmorrhage resulting from intestinal ulceration or operative interference, and the description of the clinical method used is particularly valuable owing to its clearness. The method is being tried in London hospitals, but is worthy of a much more general trial, and, reading Dr. Crile's cases, it is evident that there may arise many occasions when a knowledge of the benefits to be derived from transfusion would be of practical importance in private practice.

AMONG recent papers dealing with the Diagnosis and Treatment of Appendicitis—matters which must always be of importance to the practitioner, especially in these days when so many differences of opinion exist as to the exact time when surgical interference is desirable—two in the *Boston Medical and Surgical Journal* are particularly commendable because of the clearness and brevity with which the authors treat their themes. Beverley Robinson, discussing the treatment, remarks that it is often very difficult to diagnose between cases of pure

appendicitis and colitis. When an absolute diagnosis of appendicular trouble is impossible he recommends expectant treatment—rest in bed, hot-water bag applications to the abdomen, laxative enemata, and two hourly doses of codeine in very small amounts from $\frac{1}{30}$ to $\frac{1}{8}$ of a grain by mouth if the pain requires it. Hypodermic injections of morphine are not advisable. The author has found 10-grain doses of salicin, given four hourly, of distinct use in treating such cases, and makes it a rule to limit the diet to fluid, given in very small quantities. The indications for operative interference are not distinctly laid down, and the author appears to look unkindly on early operations, remarking that “very many cases of perforation cause an abscess limited by protective false membrane, if not operated on too soon or ill-advisedly”—a statement which is hard to prove, and the truth of which it would be manifestly ill-advised for the practitioner to take for granted in every case. Fisher, in an article dealing more particularly with the differential diagnosis of appendicitis, states that in 51 per cent. of cases the appendix can be felt on palpation—another statement which is open to grave doubts, although it is qualified by the condition that the organ must lie upon the aponeurosis of the psoas, which must be relaxed by flexion of the thigh, and that the abdominal walls must not be rigid. McBurney's point, as Lauz has proved, does not correspond to the situation of the appendix, but Fisher believes that tenderness over this point is of great diagnostic importance.

SELIG, of Frauenbad, in a paper read before the Medical Society of Prague, summarises a series of interesting observations on the heart of sportsmen. Many authorities have alleged, on evidence obtained by percussion, auscultation, and cardio-graphic tracings, that an inevitable concomitant of strenuous exercise is a dilatation of the heart. Some of them have even attempted to show that moderate exercise brings about such dilatation. Mendel and Selig have employed orthodiagraphy and orthodiaphanoscopy in investigating this question, and have found, as has already been alleged by Lennhoff and Levy-Dorn, that even in professional wrestlers there is no evidence that excessive muscular exercise leads to cardiac dilatation. Now the authors have gone a step further, and have investigated the hearts of professional swimmers immediately after long-distance races. They found that in ten cases out of eleven there was diminution of, instead of an increase in, the volume of the heart, a fact which they explained by the general dilatation of the blood vessels which is known to follow muscular exercise. In a large number of professional cyclists, Marathon racers, and football players they were unable to prove any dilatation of the heart immediately after a bout of violent exercise. They conclude for these findings that although cardiac lesions are not rare amongst amateur sportsmen, they are by no means common in trained professionals, and that Bryers statement that in Austria alone more than 250,000 men have been incapacitated from service in the army owing to excessive muscular exercise as bicyclists, football players, etc., is absolutely unfounded.

WHEREAS Angina, or painful difficulty in swallowing and breathing, is for the most part treated by the buccal route, Berliner for ætiological reasons proposes to apply treatment to the nose. In the *Münchener Medizinische Wochenschrift* he describes a method whereby the patient makes applications to the nasal mucous membrane of small quantities of an ointment consisting of protargol $1\frac{1}{2}$ grams dissolved in $2\frac{1}{2}$ grams of distilled water, to which is added 6 grams of anhydrous lanoline, .1 grams of menthol, 3 grams of saccharine, and sufficient vaseline to bring the total weight up to 15 grams. The menthol is used because of its effect on congested surfaces, the saccharine to improve the taste of the mixture. As soon as the flavour of the menthol has disappeared from the patient's pharynx, to which it travels quickly, the ointment must be applied again. The author claims to have had favourable results with this treatment in cases of catarrhal angina, as well as upon the cold which accompanies this affection. Parenchymatous angina has cleared up yet more quickly than the last variety, even when accompanied by an abscess which needed opening. All varieties of the affection which are accompanied by an exudation are rapidly cleansed, with the exception of angina due to syphilis, which needs the application of anti-syphilitic remedies. The treatment is exceedingly useful as an adjuvant to antitoxin in cases of diphtheria of the nose and throat. The author has also used the ointment when treating acute coryza.

KIRCHNER, in the *Deutsche Zeitsch. F. Chirurgie*, describes two cases of Traumatic Motor Aphasia treated by operation with successful results. In both cases the condition was the result of a head injury. In the first case, that of a man of 53, the patient after the accident could only say “Yes” and “No”; he was unable to repeat words or to read them aloud, but was able to understand what was said to him, to write and to read. At the operation a splinter of bone 6 centimetres long was found lying on the left inferior frontal convolution and in the inferior part of the fissure of Rolando, without, however, penetrating the brain substance. This splinter was removed, and the following day the patient was able to talk disjointedly and pronounce words he had been unable to pronounce two days before. In about three weeks all aphasic symptoms disappeared. The second patient, aged 26, who had suffered a more violent accident, was only able to pronounce a few inarticulate words, but was able to understand orders given. A right facial paralysis was present, and the pulse was slowed. A subdural hæmatoma, 6 centimetres in extent, was removed from the same locality as the splinter in the previous case. The following day the patient was able to say “Yes” and “No,” to write and to read. In a week's time the patient commenced to regain slowly his power of speech. The author classifies these cases under the heading of sub-cortical motor aphasia, holding that such a heading does not exclude cortical lesions such as were present in these cases.

HOSPITAL CLINICS.

SOME UNUSUAL FEATURES OF LEAD POISONING.

By Sir THOMAS OLIVER, M.D., LL.D., D.Sc., F.R.C.P.; Physician to the Royal Victoria Infirmary, and Professor of Physiology in the College of Medicine, Newcastle-upon-Tyne.

(A Lecture Delivered at The Polyclinic, May 19, 1909.)

(Continued from page 232.)

THE peculiarity about plumbism is that lead is not poisonous in a single dose. In order to cause paralysis the poison must be taken into the system in small doses over a long period. Occasionally, where there is idiosyncrasy, paralysis may occur in the course of a few weeks. As causes contributing to the development of paralysis in persons who work among lead must be mentioned alcohol and fatigue. It is important to remember that paralysis may come on a long time after the patient has ceased coming into contact with lead. Opinion is still divided as to whether paralysis in lead poisoning is due to a peripheral or a central lesion. Where a lesion has been found in the anterior cornual cells, it is taught that this may be a sequel to the peripheral neuritis. Most writers regard lead paralysis as the result of a peripheral neuritis, but the paralysis does not always follow in its distribution the branches of a peripheral nerve. The muscles affected act synergetically or in physiological groups without any reference to the distribution of nerve fibres, and while atrophy is usually also present, occasionally there is atrophy alone without noticeable paralysis. The onset of the paralysis may be comparatively rapid or slow. In one patient loss of power in the hands occurred when combing her hair; often the paralysis develops between night and morning, or is more gradual and preceded by a sense of muscular tiredness or of weight, cramp-like sensations or tremors, and, less frequently, by hyperæsthesia or anæsthesia. Occasionally the affected muscles are tender, pain is felt on pressing the affected nerve, or there may be patches of analgesia and anæsthesia, as, for example, over the inner and posterior parts of the forearm in wrist-drop. These are not patches of hysterical anæsthesia, for when the skin is pricked it readily bleeds.

The functional disturbances in peripheral neuritis are motor, sensory, or mixed. In lead paralysis there is little sensory disturbance. It is usually motion and muscular nutrition that are alone affected. In well-developed instances of lead paralysis the peripheral nerves frequently show lesions of a gross character, but although few, if any, changes are observed in the cells of the anterior cornua of grey matter of the spinal cord, these cells have in all probability not escaped. The nearer to the periphery the nerves examined, the more pronounced are the signs of interstitial neuritis. It is difficult to say how far up the nerves the changes extend. Sometimes they reach as high up as the brachial plexus and the anterior spinal roots. In only a few cases have pathological changes been observed in the anterior cornual cells. Several of these are atrophied, and there is a multiplication of the nuclei of the neuroglia. Although lead is believed to have a specific action on muscular fibre, inciting unstriped

muscular fibre especially to contract, yet it has not been found that the paralysed muscles in lead poisoning contain more lead than the non-paralysed. The loss of power, therefore, cannot be explained on the predilection of certain muscles for lead. On the purely peripheral neuritis theory it is difficult to explain the almost constant freedom of the supinator longus, also the implication of extensors, as opposed to the flexors. My own feeling is that while peripheral lesions predominate, the anterior cornual cells also tend to become involved, and possibly, too, muscular fibre itself; for an isolated muscle exposed to lead is more readily fatigued than a healthy one. Tiredness of muscle is a common complaint of lead workers before paralysis develops.

Occasionally appendicitis is simulated by lead colic and *vice versa*; so too is pelvic disease. The abdomen has been opened by surgeons for supposed appendicitis when the illness was lead colic, and treatment has been adopted for supposed pelvic peritonitis when the malady was plumbism. As in nearly all cases of lead poisoning indican is present in the urine, I regard indicanuria as of some assistance in framing a diagnosis. Formerly I was of the opinion that indicanuria pointed to an excess of intestinal fermentation, but I am convinced that it occurs without intestinal putrefaction. Shown by adding chloroform to equal parts of the urine and hydrochloric acid, it may be due to functional derangement of the liver. As bearing upon this point, it is of interest to remember that during lead colic sulphocyanide of potassium, which gives a reddish brown colour with a weak solution of liq. ferri. perchlor., disappears from the saliva, as the late Dr. Samuel Fenwick first demonstrated, and reappears in it on the cessation of the abdominal pain.

As an illustration of diseased kidneys and arteries with high blood-pressure ending in cerebral hæmorrhage in a lead worker, the following notes of a case of pontine hæmorrhage are worth recording. W. C., aged 56, a furnace man in a red-lead works, was admitted into the Infirmary under my care, complaining of abdominal pain and weakness of his legs. He was extremely anæmic. There was no well-marked blue line on the gums, but a few blue patches on the inside of the lower lip opposite decayed teeth. Pulse 60, of high tension, equivalent to 275 mm. Over the mitral area a prolonged reduplicated first sound could be heard, the second aortic sound was accentuated. Urine, which contained albumen, had a sp. gr. 1.009; 64 ounces were passed daily, containing 300 grains of urea. The red blood cells numbered 2,500,000 per c.mm. and the white corpuscles 6,000, the hæmoglobin stood at 50 per cent. No lead was found in the urine at first, but after a few doses of potassium iodide it appeared. Its presence in the urine was

accompanied by extremely severe headache and by an aggravated loss of eyesight not due to a rise in the arterial tension, for under the administration of potass. iodide it fell from 275 to 256, and ultimately to 250 mm. Hg. Mr. Wardale, ophthalmologist to the Royal Victoria Infirmary, on examining the eyes, found optic neuritis with hæmorrhages in both eyes, also small cotton wool-like patches in the left eye. As the potassium iodide had increased the headache the drug was stopped. By degrees the pain lessened and the sight improved. A week or ten days afterwards the patient was seized with convulsions and died. At the autopsy by Dr. George Hall the mitral cusps were found healthy and the aortic cusps thickened. The heart weighed $24\frac{1}{2}$ ounces. The kidneys were contracted. There were marked atheroma of the vessels at the base of the brain and a small aneurysm of the basilar artery. On section of the pons a large hæmorrhage was found. In the right cerebral lobe in front of the internal capsule a hæmorrhage the size of a chestnut was found of older date than that in the pons. On microscopical examination the brain cells in the cortex were found to be healthy, but the arterio-capillaries of the surface were thickened, and capillary nucleation was better marked than usual. In the liver Professor Bedson found considerable traces of lead.

It is known by those who have had the fortune to see autopsies in cases of acute lead encephalopathy how completely absent may be pathognomonic morbid appearances. The details of the following case, which came under the care of my colleague Dr. W. E. Hume, which I saw with him, and for permission to publish which I express my thanks, are therefore of more than ordinary interest. A plumber, aged 35, was admitted into the Infirmary in a state of unconsciousness on November 30, 1908. Three days previously he had returned from work with severe headache, which continued all night, but on the following morning, although feeling ill and dizzy, he returned to work, where shortly afterwards he was seen to fall and to be convulsed. Within an hour he had sufficiently recovered to go home, where, in the evening, he had another convulsion. Previous to this breakdown he had attended the Eye Infirmary for failing vision. On admission under my colleague's care knee-jerks were present on both legs, the right arm and leg were rigid and motionless, while the left arm and leg were moved convulsively. Babinsky's sign was absent on the right side, but present on the left. There was optic neuritis, more marked in the right eye. The temperature was 100° F., rising to 101° . There was vomiting with incontinence of urine and fæces. There was no albuminuria. Nothing abnormal was heard over the cardiac area; blood pressure 105. As the persisting unconsciousness and the physical signs suggested cortical irritation, possibly tumour, Mr. Grey Turner trephined the left side of the skull, but nothing was found except slight œdema of the brain. On the following day the patient died. At the post-mortem examination by Dr. George Hall the internal organs of chest and abdomen were, practically speaking,

healthy. On removing the calvarium there was observed slight thickening of the pia-arachnoid membranes over the vertex, but these were not adherent. The convolutions of the right brain, also of the left side in the neighbourhood of the operation area, exhibited a distinctly watery appearance. There was no flattening of the convolutions. Here and there the vessels at the base of the brain showed small patches of atheroma, and small petechial hæmorrhages were seen in the substance of the brain, but no gross hæmorrhage. The cerebellum was normal. At the autopsy, beyond slight œdema of the brain which suggested uræmia or plumbism, there was nothing to explain the cause of death, and no morbid appearances sufficiently marked to make a diagnosis absolute. This was only possible after a chemical analysis of the internal organs. The following is Professor Bedson's report:—

Brain contains 3 parts of lead per million of tissue.
Liver contains 6 parts of lead per million of tissue.
Kidney contains 50 parts of lead per million of tissue.
Spleen contains 40 parts of lead per million of tissue.

Here then is a case in which, but for the chemical analysis of the urine and internal organs, the diagnosis would have remained more or less only a matter of probability. The interesting point in the chemical analysis is the small amount of lead found in the liver compared with the kidneys and spleen. Usually this organ contains the largest amount of lead. The patient's symptoms pointed to brain, and yet a mere trace of lead was found therein after death compared with the kidney.

The interesting paper on lead poisoning in children by Dr. Jefferies Turner,* in which he reminds us of the differences in the symptoms between children and adults, contains, practically speaking, all that can be said of the matter. Dr. Turner tells us that in many of his patients it is not so much a continuous blue line which is present on the gums as a series of extremely small black dots; that gastro-intestinal symptoms are less well defined, and that while vomiting is frequent and persistent, gentle pressure upon the abdomen usually gives relief. Constipation, although frequent, is not invariable. Pains in the legs, usually worse at night, are much complained of. These are followed by "toe drop." Wrist drop is not a characteristic feature of lead poisoning in childhood. The tibialis anticus and the extensor longus digitorum pedis are the earliest muscles to become affected. Turner draws attention to the occurrence of acute diaphragmatic paralysis attended by cardiac weakness, rapid pulse, great depression and vomiting, also to the occurrence of a "localised basic meningitis," in which the children complain of severe headache, with pains in the neck running down the arms, retraction of the head, vomiting, and internal squint. Squint may be the only physical sign present; both external recti are involved, occasionally, too, some of the muscles supplied by the third nerve, the levatores palpebrarum, escaping. When convulsions do not develop usually the signs of meningitis disappear, but imperfect vision may remain for a time. In some instances eyesight is entirely lost owing to neuro-retinitis.

* *British Medical Journal*, April 10, 1909, p. 895.

To this picture of plumbism in children in Queensland, due to accidental poisoning from the white lead with which the balconies of the houses are painted, I feel that I ought to add the still more harrowing accounts of the lead poisoning of children in Hungary, to which attention is drawn by Dr. Adalbert Chyzer,* of Buda Pesth, and in which heredity and exposure to lead play the principal rôle, since the manufacture of cheap pottery in many parts of Hungary is a home industry. The potting shops adjoin the dwelling houses. Dr. Chyzer found that the earth taken from the living-room of the houses contained sometimes as much as 8.7 per cent. of lead, that the blue linen gown and clothes worn by a boy five years old contained 0.243 gramme of lead, and his cap 0.0144 gramme. A workman's clothes contained 3.90 grammes of lead, and a pillow on which a child was lying suffering from plumbism contained 0.0897 gramme of lead. In an infant one year old Chyzer found deposits of lead in the gums and on the teeth. Sometimes it is in the form of a dirty grey line at the neck of the teeth or a violet border upon the gums. The milk teeth of potters' children decay early and become black. There is frequently toothache with complaint of pain in the jaws; the glands underneath and the bone itself often become enlarged. The early shedding of the milk teeth may be attended by a periostitis and by a limited necrosis requiring surgical removal of the dead bone. Chyzer has seen three cases of periostitis and 10 of necrosis. He attributes the necrosis to the action of lead, since in all the little patients and their parents there were signs of subacute lead poisoning. Rickets is frequently seen in the children; most of them are extremely stunted in their growth, others again are subjects of a chronic form of saturnine encephalopathy. A few of them, in addition to paralysis and atrophy of the legs, suffer from blindness and convulsive seizures. Chyzer draws attention to what I have never met, the occurrence of hæmatemesis in adult potters. Among the potters of Austria-Hungary we are brought face to face with some of the worst evils of lead poisoning, for wherever pottery is a home industry many of the children are not only the offspring of parents that are themselves lead poisoned, but they are reared in an atmosphere which cannot but be contaminated with lead dust, and thus we find the children, under these circumstances, the unfortunate victims both of an inherited depraved constitution and of infection. The animals born in or near the houses die. A potter cannot keep a singing bird, nor can he rear fowls, for the dust of the workshop kills them. The cat is extremely susceptible to lead. It soon develops colic, and if the pain persists for long the animal becomes almost mad; it keeps knocking things over in its wild career, or dashing itself against obstacles in its path; it ends by throwing itself into water.

THE IMMEDIATE EFFECTS OF LEAD UPON THE HEART AND CIRCULATION.

Lead when taken in a single dose is not a powerful poison. I have had patients who have inten-

tionally taken one large dose of acetate of lead, and who have quickly recovered without any bad effects. With the view of ascertaining upon which organ or organs lead acts directly when introduced into the system by an intravenous channel, I carried out a series of experiments, with the assistance of my colleague Dr. R. A. Bolam, to whom I beg most heartily to acknowledge my sense of indebtedness. Sollman* reminds us that lead is a specialised poison for many tissues and organs. It is a general poison to protoplasm, and exercises a more injurious influence upon the more highly developed tissues, such as nerve and muscle, than upon the blood corpuscles. In our experiments† upon anæsthetised dogs varying quantities of solutions of nitrate of lead were carried into the veins, means being taken to register the blood pressure. When 5 c.c. of distilled water were injected into a dog under ether, no appreciable effect was produced on the arterial pressure. On the other hand the injection of 5 c.c. of a 1-per-cent. solution of lead nitrate was followed shortly afterwards by a slight fall of the arterial pressure; 5 c.c. of a 2-per-cent. and subsequently a similar quantity of a 5-per-cent. were both followed by a slight fall, which in each instance was fairly quickly recovered from. Ten c.c. of a 10-per-cent. solution was followed by a very marked fall and slow recovery. A second injection of 10 c.c. of a 10-per-cent. solution was succeeded by a great fall of arterial pressure. The declension was rapid, and shortly afterwards the heart ceased beating. Meanwhile respiration continued, and after the lapse of three to four minutes the heart, recovering itself, began to beat again, feebly at first, and then by degrees more strongly until the beats became normal. On injecting 5 c.c. of a 10-per-cent. solution of lead nitrate the arterial pressure again fell, but recovered itself, while 10 c.c. of a 10-per-cent. solution was succeeded by an extremely rapid fall; respiration continued but gradually became interrupted, the heart's beats, becoming feebler and ineffective, ceased, as also did respiration. At the autopsy, 24 hours afterwards, the urine was found to be free from albumen. It contained a reducing substance like sugar, but which was not sugar. The wall of the heart was flabby, especially that of the right ventricle, which contained a small quantity of dark fluid blood. The lungs were healthy, kidneys congested, liver dark but healthy. The abdominal veins were extremely full and tense. The brain, which was congested on the surface, was pale internally.

By a male dog, to whom under chloroform 5 c.c. of a 5-per-cent. solution of lead nitrate was administered intravenously, amyl nitrite was inhaled on the restitution of the blood pressure, the immediate result being, as expected, a renewed fall of pressure. The effect of a fresh injection of nitrate of lead was a more than usual rapid fall of pressure with increased respiration, due apparently to stimulation of the respiratory centre for want of blood. Heart's beat and respiration ceased, but respiratory efforts were renewed at intervals and repeated for

* Des Intoxications par le Plomb se présentant dans la Céramique en Hongrie, 1908.

* *Text-book of Pharmacology*, p. 638.

† See diagrams published May 29, pp. 229 and 231.

three minutes, after which they ceased, the heart not beating at all. At the autopsy there was nothing to note except that the heart was filled with fluid blood and the abdominal veins were turgid.

The effects of the intravenous injection of lead are the same, whether the animal used is a dog or a rabbit. There is always, if the dose is sufficiently large, a fall of blood pressure, and the fall is general. It occurs in the splanchnic area and in the general systemic vessels. In the case of lead there is no immunity produced, as is the case with some other poisons. The blood pressure falls gradually but still fairly rapidly, and the heart ceases to beat. Both may be recovered, and the cardiac sounds again become audible. Lead when introduced directly into the blood acts partly and primarily as a vaso-dilator, but when in lethal doses it seems to have a further direct action upon the heart, as the tracings show. Respiration is apparently not directly affected by lead. It only becomes affected through the falling blood pressure. One of the noticeable consequences of respiration continuing is to set in motion the movements of the heart. There is no uniformity in regard to the amount of lead required to cause death. In this circumstance lies an explanation of the idiosyncrasy of certain persons to lead poisoning. Some are more readily influenced than others. In these experiments any difference as regards sex was not apparent, nor had atropin the slightest effect in altering the influence of lead upon the heart. At the autopsies the intestine was not found to be contracted as in the case when lead is administered by the mouth over a period.

In lead poisoning there may be few, if any, naked eye structural alterations found after death, none, at any rate, that can be regarded as pathognomonic. The presence of contracted kidneys, slight œdema of brain, and of albumen in the urine removed from the bladder would, with the history of a patient having had convulsions, suggest uræmia, while these with, in addition, a blue line on the gums, and the history or not of the individual having worked amongst lead, would raise the question of plumbism. The association of lead poisoning and interstitial nephritis is so usual that when after death the kidneys are found contracted, and the occupation followed has been such as to favour the possibility of plumbism, there is a disposition to regard lead as having been the cause of death, and yet other causes than plumbism may have been in operation in regard to which it is difficult to apportion their proper share. Lead workers are not less predisposed, for example, to alcoholism than other persons. In all doubtful cases, and especially in view of the application of the Workmen's Compensation Act, no diagnosis can be complete without a chemical examination of the internal organs and of the urine by a competent analyst. Lead, as already stated, can remain in the system for years. It is excreted, too, long after it has ceased to enter the body. It is difficult to say how far lead, when found in extremely minute quantities in the internal organs, is to be regarded as the cause of death. In

acutely fatal cases of saturnine poisoning only the merest traces of lead may be found in the brain, liver, and kidneys, these organs being otherwise healthy, and yet we cannot but attach considerable importance to this small quantity, for in the fatal case above reported only three parts of lead per million of brain tissue were found. Besides, in chronic cases the long-continued passage through the system of minute quantities of lead comes to be followed by structural changes in the internal organs, the presence of which, along with the finding of the merest traces of lead, would be strongly presumptive evidence of plumbism. In cases where there is the possibility of a claim being raised in a law court it is well to have a chemical examination of the internal organs for lead, since the poison is often long retained in the system. In the event of no lead being found in the body of a lead worker wherein pathological changes in kidneys and blood vessels are well marked, the presence of interstitial nephritis would be of some importance. Allusion has been made to the possible part played by alcohol in determining kidney lesions. Probably the influence is secondary, and not direct. The incidence of alcohol is rather upon the liver than upon the kidneys. Even if we admit that painters as a class are as intemperate as other workmen in regard to the use of alcohol, the fact remains that in them interstitial nephritis is met with from four to five times more frequently than in most other workmen, a circumstance which of itself suggests that some occupational influence has been in operation.

It is not my intention to deal with the medicinal treatment of lead poisoning, but I cannot dismiss this subject without referring (1) to the researches of Dr. Jacques Carles, of Bordeaux, upon the important rôle of leucocytes in the absorption and elimination of lead from the body, and (2) to the ionisation of lead by electricity. By causing abscesses Dr. Carles* finds that considerable quantities of lead in the pus can be thrown out from the body, and that this forms an effective method of treating plumbism. Having fed dogs with lead for a few days, he injects into the subcutaneous tissues of the dorso-lumbar region essence of turpentine. A sharp reaction follows, so that within seven days afterwards an abscess forms, from which several grammes of pus can be removed by incision. After destroying the animal under chloroform quantities of the organs equal in weight to that of the pus removed are submitted to chemical analysis. In one dog thus treated Carles found in 26 grammes (a) of blood a complete absence of lead, (b) in a similar quantity of brain the merest trace of lead, (c) in the intestine a visible but imponderable quantity of lead, (d) in the liver 0.003 gramme of lead, and in (e) the pus from the abscess 0.005 gramme of lead. Although the liver is usually regarded as the principal organ of elimination of lead, the pus from the artificially induced abscess contains more. The absence of lead from the blood is interesting, since it suggests that the leucocytes, which are the carriers, only traverse the circulation, pass out into the tissues

* *Bulletin Général de Thérapeutique*, February 8, 1909, p. 161.

and organs, and therein either deposit the lead or themselves become for the time being stationary cells. In other experiments as much as 0.08 gramme of sulphide of lead was obtained from the pus. Carles found after opening the abscesses and removing the pus that lead-poisoned dogs which had suffered from acute colic and constipation lost all their symptoms and quickly recovered. In dogs the subjects of chronic plumbism, and to whom no lead had been given for two months prior to the injection of turpentine, the pus from the abscess contained more lead than any of the internal organs. In some instances the blood contained traces of lead, a circumstance which shows that lead which has been stored up in the tissues can re-pass into the circulation, and thus explain those unexpected outbursts of acute lead poisoning in patients who had recovered, also cases of chronic plumbism without fresh exposure. Carles tried the treatment upon a painter who was suffering from tremor and incomplete loss of power in his hands. In the pus removed from his artificially induced abscess $2\frac{1}{2}$ milligrams of sulphide of lead were found, although the man had not been near lead for three months. In other patients similar results were obtained. Of all the means adopted for the elimination of lead the production of an "abscess of fixation" is not the least important. According to the Bordeaux physician pus always contains, weight for weight, more lead than do the viscera, and even in old-standing cases the formation of an abscess still has the remarkable power of attracting and locating the poison. Although a somewhat painful method of treatment, there are circumstances under which it might be well to adopt it.

Medical ionisation is of comparatively speaking recent date. When serving on the Dangerous Trades

Committee of the Home Office my attention was drawn to the electrical-bath treatment of workmen affected by plumbism, and from whose bodies, when immersed in whole or in part, lead was said to be removed; since the presence of the metal could be chemically proved in the water of the bath and on the submerged metallic rod. As at the time of which I speak I had had no experience of the electric bath, I could offer no opinion upon its utility as a means of treatment. Since then Stephen Leduc, Finsi, and others have placed medical ionisation on quite a scientific basis. Having administered for several months small doses of acetate of lead to a rabbit, in whose fæces submitted to Mr. T. M. Clague for analysis lead was found, the animal under the influence of anæsthesia was placed in an electric bath, with the object of extracting lead from its tissues. Its forelegs were submerged in water containing a small quantity of potassium acetate, and the hind limbs up to the knees in another basin of distilled water, one pole being in each basin. The animal was kept in the bath for fully half an hour, a current of 14 milliamperes being employed. In the water of the bath and on the negative pole traces of lead were found. The rabbit experienced no inconvenience from the treatment. A month afterwards and later the bath treatment was again tried, for slightly longer periods, and under 19 and 25 milliamperes, the results being that not only was lead found on the negative pole and in the water, but the animal improved in condition. By this line of treatment to which Dr. Jones, of St. Bartholomew's Hospital, has on more than one occasion drawn attention, excellent results can be obtained. For many suggestions in regard to the electrolytic treatment of plumbism and for chemical analysis I am indebted to Mr. Clague.

SPECIAL ARTICLES.

THE TREATMENT OF HEPATO-INTESTINAL TOXÆMIA.—II.

THE treatment advocated by Dr. Quintard for the hepato-intestinal toxæmia he describes is as follows: The first thing to decide is whether the patient should be put to bed or not. If the condition has existed for a long time, or if it is particularly severe; if the nervous symptoms are especially prevalent, particularly in the case of women; if anæmia has reached a severe degree; or if such conditions as myasthenia gastrica or concomitant gastro-intestinal inflammation exist: then these patients should be put to bed and kept there for from three weeks to two months. If possible this rest cure should be undertaken away from the patient's own home and immediate family, and no communication should be held between him and his friends until such time as the physician thinks right. Cases of hepato-intestinal toxæmia, complicated as they frequently are by neurasthenia, and possibly by visceral disorders, are difficult to treat, and unless for the time being their entire mode of life is under the strict surveillance of their medical adviser, such cases often drift from bad to worse, and in the end read disaster for doctor and patient alike. It is well at the onset to inform both the

patient and his family that it will take weeks, and probably months, for the recovery to be complete.

Each case should be thoroughly examined at the outset; it may be a week before one can complete both the physical examinations, and also those of the blood, the urine, the gastric contents, and the fæces. During such period the patients may be up and about, but whenever practicable it is far better to have them in bed, preferably in a hospital or institution where such examinations can be carried out in a thorough and systematic manner. Failure to cure these toxic conditions may frequently be traced to lack of thorough investigation.

Diet is an all-important matter in case of hepato-intestinal toxæmia, but one cannot emphasise too fully the fact that there can be no definite or dogmatic rules given to cover all cases. The results of the physical and clinical examinations obtained in each individual case must in a great measure be the guide. Certain general principles can, however, be laid down. The use of tobacco and of alcoholic beverages should be positively prohibited. Coffee should be interdicted as a rule. Highly seasoned foods, condiments, salted, dried, smoked, or pickled foods of

any kind should not be allowed. At times plain pudding can be given in moderation, but sugary sweets, chocolate, cakes, and so forth are dangerous. Sugar itself should be reduced to a minimum. Otherwise good, plain food in reasonable quantities and at regular times can be permitted.

When the patient is in bed, massage, Swedish movements, and perhaps hydrotherapy, are great aids to the treatment. Regular daily massage should always be given; but mildly at the start, and in those who are exceedingly nervous it may be wise to wait a week before beginning it. Above all, everything for these patients should be according to rule, time, and definite system. Schedules for each patient should be made out and handed to the nurse. Under no circumstances, however, should the patients be permitted to see either their charts or their schedules.

So far as drugs are concerned, the first object is to rid the system of accumulated poison. This is accomplished by flushing out the liver and the intestines. Apart from special treatment rendered necessary by definite gastro-intestinal complications, it is Dr. Quintard's rule to give these patients three times a day before each of the principal meals 10 grains of glycerophosphate of soda in a large glass of hot water, to be sipped slowly. This may be continued for many weeks. He also administers to these patients every other day for the first week a mercurial in the following form:

R Ext. nucis vomicæ ... gr. $\frac{1}{2}$
 Massæ hydrarg. ... gr. v.
 Ext. colocynth. comp. ... gr. iiij.
 Ext. rhei ... gr. viij.

Misce et divide in capsulas duas.

Sig.: Both capsules to be taken at night.

This is to be followed the next morning by a dose of citrate of magnesia or Rochelle salts, or phosphate of soda, or one of its various preparations. On the morning when such saline is given that morning's dose of glycerophosphate of soda is omitted. The second week the above mercurial is given twice, and during the third week only once.

It may be well to remark particularly that blue mass is far more efficacious in these cases than is calomel. The latter at times acts too violently and leaves the patients depressed, with feelings of nausea and chilly sensations that may last as long as 48 hours after the dose has been taken. Moreover, after calomel one is more liable to have such symptoms as breathlessness on exertion than after the use of blue

mass. The course of treatment with blue mass and salines may have to be repeated. If there is a particular desire to give calomel it should be given in quite small doses—gr. $\frac{1}{4}$ to $\frac{1}{2}$ —either alone or with salol or carbonate of soda.

If there is any actual colitis or entero-colitis, or if constipation has existed for a long time, or if the toxæmia is severe and accompanied by intestinal flatulency, it is well to resort to high colonic lavage. The solutions commonly employed for this are either normal saline or else Carlsbad salts in water, a drachm or two drachms to the quart. The water should be fairly hot to avoid abdominal cramps.

The anæmia will need attention. After the first week or ten days, when the liver and intestine have been flushed out to some extent, one may begin to give the blander preparations of iron. The pyrophosphate in one-grain doses in capsules or solution, or the peptomanganate, are good. No iron tonic should be given until the toxæmia is at least partly under control. Later, when an iron tonic treatment can be adopted with less reserve, the following prescription will be found serviceable:—

R Acidi arseniosi ... gr. $\frac{3}{8}$
 Strychninæ phosphatis ... gr. $\frac{1}{40}$
 Ferri pyrophosphatis ... gr. j.
 Misce et mitte in formâ capsulæ.

Sig.: Take one capsule three times a day after meals.

Or as an alternative:—

R Strychninæ glycerophosphatis gr. $\frac{1}{40}$
 Ferri glycerophosphatis ... gr. j.
 Mangan. glycerophosphatis gr. ij.
 Misce et mitte in formâ capsulæ.

Sig.: Take one capsule thrice daily after meals.

For the nervous manifestations in these cases, especially at the onset, there is nothing better than the combinations of bromides. Five grains each of ammonium, potassium, and sodium bromide given in plain water two or three times daily act better than any other sedative in these cases. When neurasthenia is a complication the preparations of valerian, especially valerianate of zinc in 1- or 2-grain doses three times a day, seem to act well. Strychnine and its various combinations may be given with advantage where the patients are in need of such a neuro-muscular stimulant and tonic, but if the patients are very nervous or if the toxæmia is severe strychnine should not be given at the start. The same may be said of arsenic and its various preparations.

CALCIUM LACTATE FOR LYMPHATIC HEADACHE, URTICARIA, Etc.

URTICARIA, chilblains, lymphatic headache, and the like are associated with a condition of defective blood coagulability, and it is generally recognised that any lesion that can be included under the general term of serous hæmorrhage can often be greatly benefited by the oral administration of calcium salts. The preparations best adapted for this purpose are the chloride and the lactate, and of these the latter has the advantage that its organic radicle is readily oxidised in the system, with the result that the base remains more fully at the disposal of the organism than is the case with the chloride. It is important, however, that the lactate should be freshly prepared, since it decomposes when kept

any length of time. For adults the dose is 15 grains, flavoured with $\frac{1}{2}$ to 1 minim of tincture of capsicum, and made up to the ounce with chloroform water. The treatment should be continued for six weeks at a time, three doses being given daily about an hour before food. More than half the cases of chilblains so treated are rapidly cured, though a repetition of the course may be required the next winter. Other affections in which similar treatment has proved very beneficial are boils, headache of the lymphatic type, urticaria, face-flushings, acne rosacea, and perspiring hands and feet with offensive perspiration. If constipation should result from the use of the calcium, it may be corrected by giving a small dose of infusion of senna pods at bedtime.

SURGERY.

BUBOES: A WARNING.

As buboes are commonly supposed to represent a condition, or, perhaps, better, a complication, devoid of any special danger to life, and as the surgical operative treatment of such of them as may require it is classed under the head of minor surgery, it is perhaps natural that little or no emphasis has been laid on the dangers which may, and not infrequently do, result in connection with this branch of surgery. Professor Eugene Fuller, of New York, has published some cases illustrative of the catastrophes that have arisen in different patients after operations upon buboes, and he has emphasised the necessity of treating buboes with circumspection.

Buboes generally lie just above Poupart's ligament, less commonly below it, and sometimes over it. In cases of active suppuration a fairly extensive area both above and below it is frequently involved. The deep limits of such suppurations are determined by the external oblique layer of the abdominal fascia, Poupart's ligament, and the deep fascia covering Scarpa's triangle. Over these structures Nature, if left to herself, throws out a barrier of cellular infiltration and granulations, which, as a rule is effective in protecting the important parts beneath from invasion by the suppurative process. Such suppurations, thus checked from extending in a deep direction, tend to burrow subcutaneously and to point externally. Just below the abdominal fascia is the important lymph space, limited externally by the abdominal fascia and the fascia propria of the pelvis, and internally by the peritoneum. In this lymph space lie the external iliac artery and vein, while between the layers of the fasciæ, and still more exposed, are the superficial epigastric and circumflex iliac vessels. The femoral artery and vein lie in Scarpa's triangle, just under the fascia, and, consequently, much nearer to the surface than are the external iliac vessels.

The dangers in connection with the surgery of buboes lie in two directions. First, in a direct or indirect injury to the blood-vessels just mentioned, and, second, in an inflammatory invasion of the lymph space between the fascia propria of the pelvis and the peritoneum, the infection having entered through the abdominal fascia. Direct injury to blood-vessels lies in an actual wound, during operation, of the femoral artery or vein, of the external iliac artery or vein, or of the epigastric or circumflex iliac artery or vein. Cutting into branches of the main vessels is less serious at the time, but there is still the risk of the purulent infection loosening the ligature, with secondary hæmorrhage as the result.

The danger from indirect injury to these blood vessels lies in unduly exposing their walls during operation through removal of the connective tissue and the fascial coverings, thus allowing the infective process causing the bubo to come into direct contact with them. Infection coming into such direct contact with these blood-vessels may cause septic phlebitis, or, through ulcerative action, secondary arterial hæmorrhage.

Inflammatory invasion of the deep lymph space

mentioned above is generally occasioned by two surgical errors. First, at the time of operation the basement structures of the bubo are so removed by curettage, or by cutting with curved scissors, that the abdominal fascia is laid bare and perhaps actually damaged. The second error lies in making too narrow a cutaneous opening. The combined result of these two surgical faults is that the cutaneous opening closes prematurely to a narrow sinus, the original bubo cavity being left as a pus-pocket, the contents of which finally burrow through the injured abdominal fascia and enter the lymph space.

The cases of immediate death in connection with bubo surgery, wherein the knife of the operator, during the attempt to open the abscess by a single quick incision, penetrates too deeply and lays open a main trunk blood-vessel, are, of course, infrequent. In such cases, as a rule, incision has been attempted without an anæsthetic, and the patient, on the first plunge of the knife point, has sprung upwards from the table, or has struck or seized the surgeon's arm. The fact that many individuals cannot control bodily actions in the event of sudden and severe bodily pain should always be in a surgeon's mind before an attempt is made to open a bubo in this manner; and not only should the arms be held, or so guarded that the operator cannot be seized, but the knife point should be directed superficially or laterally rather than downward, while the end of the little finger of the operating hand should rest, before and during the performance of the incision, on the body of the patient.

Another trouble that has not infrequently arisen has been the deep burrowing of pus, and even secondary hæmorrhage, from erosion of an artery compressed by packing the abscess cavity too drastically with gauze. Professor Fuller lays down the following rules to be observed in opening all buboes:—

In making the primary incision, be careful not to enter the knife-point deeply.

Make the external opening so free that there can be no premature closure of the external wound. In order to be sure of this, a cruciform external incision is often wise, or even necessary.

In the case of a virulent bubo, never curette or disturb the necrotic contents, but allow a natural demarcation to take place between the healthy peripheral tissue and that which is sloughing as the result of the purulent infection.

In the case of suppurative tubercular buboes, after exposing them by free incision, the tumefied glands may be enucleated by means of some blunt instrument, the operator's thumb often being most serviceable for the purpose.

After so removing the glands, do not cut away with curved scissors or with a curette the sloughing, shreddy tissues left at the base, but leave them for a natural detachment.

The cavities of buboes should be but lightly packed with gauze.

ENLARGEMENT OF THE PROSTATE—III.

As a general rule it may be said that the best treatment for simple enlargement of the prostate is prostatectomy; at any rate if the condition has advanced to such a degree that there is residual urine in the bladder. In very early cases, however, much may be done towards relieving a patient's symptoms by enjoining on him a careful and well regulated existence. Thus his meals should be taken at a regular hour, his diet should be light, and anything likely to induce congestion of the prostate should be rigorously avoided; for this reason alcohol should only be taken in small quantities, and the total amount of fluid ingested should be restricted. The bowels should be regulated, and the bladder should never be allowed to become distended.

Such a course of life, though somewhat irksome in itself, will conduce to the patient's comfort, but it will not arrest the enlargement of the prostate, for this is a progressive condition, and sooner or later a pouch will form at the base of the bladder, and residual urine will collect. When this occurs the patient should have a catheter passed at regular intervals, to ensure that the bladder is completely empty from time to time. The frequency with which this should be done depends on the amount of residual urine present. Thus, if it is not more than four ounces it is sufficient to pass a catheter each night before retiring; but if it is as much as eight ounces a catheter ought to be passed after each act of micturition.

But it is obvious that this treatment is not ideal, apart from the inconvenience which it entails. Some patients, it is true, stand a catheter life fairly well, but others are very susceptible to instrumentation, and there is always the superadded risk that the patient if he passes a catheter for himself, may, sooner or later, damage the prostate and thus induce acute retention.

In the absence, therefore, of any gross contra-indication, an operation should always be advocated. The procedures on which reliance was placed before the present decade were most unsatisfactory. They consisted of such operations as castration, excision of a portion of the vas, or ligature of the internal iliac artery, the idea being that the prostate would atrophy. Such methods were empirical and unsatisfactory. But in the last ten years the operation of supra-pubic prostatectomy, which affords immediate and lasting relief, has replaced all other methods of operative treatment.

It is more important to consider the general condition of the patient before performing this operation than almost any other, on account of his advanced age. The state of the heart and the condition of the arteries should be examined, and the lungs auscultated for any sign of bronchitis. The urine should be carefully tested for abnormal constituents, and, as has already been mentioned, for deficiency of normal ones. Thus a twenty-four hours' specimen of the urine should be collected, and no operation should be performed if this contains less than 300 grains of urea. By observing these precautions the mortality of prostatectomy has been reduced from 25 per cent. to 10 per cent. in the last ten years.

The operation itself is not difficult. The bladder

is first washed out with boracic or saline solution, until the fluid returns quite clear. Half a pint of fluid is left in the bladder. A median supra-pubic incision is then made. A dependent pouch of peritoneum is often found in front of the bladder. It contains omentum, and may easily be mistaken for the pad of fat which occupies the *cavum Retzii*; it should be pushed out of the way into the upper part of the wound. The bladder will then be seen. It will be easily recognised by the fasciculation of its walls owing to its muscular coat. A scalpel is plunged boldly into the viscus, and the contained fluid will escape. If the bladder has been adequately irrigated at the commencement of the operation, this will do no harm, as it should be quite aseptic. The opening in the bladder is enlarged in the axis of the trunk with a pair of scissors until it is large enough to admit three fingers. The interior of the bladder is next explored. In patients with a deep pelvis some difficulty may be experienced in getting down to the prostate satisfactorily. This can be overcome by the assistant putting his finger in the rectum and pressing the prostate forwards. A bougie should be passed into the bladder. The point of this will disclose the position of the internal opening of the urethra. The next step is to scratch through the mucous membrane of the bladder at the back of the prostate, where a vesical pouch has been formed. The finger nail is the best instrument for doing this. The prostatic capsule is thus exposed behind, and the organ can then be freed by passing the finger all round it. The last stage consists in freeing it anteriorly. This can only be done by dividing the urethra at the apex of the prostate. It has been said that the prostate can be enucleated without interfering with the continuity of the urethra; but the writer has never seen a case where this was possible except where one lobe of the prostate was occupied by an adenoma, and the whole organ was not removed. It is essential when freeing the organ to be sure that one is in the right layer, and experience alone will enable the operator to know this. Otherwise the veins in the prostatic plexus will be torn, and troublesome hæmorrhage may result.

In the actual enucleation the greatest difficulty is experienced when one is dealing either (i) with a prostate which is the subject of chronic inflammation, and is not very much enlarged, or (ii) with an enormously enlarged prostate. In the first case it is difficult to get into the proper layer on account of adhesions, and in the second the prostate may be so enlarged that its anterior surface is jammed against the back of the symphysis pubis, a condition which may render it very difficult to sweep the finger fully round it.

If there is any hæmorrhage after the removal of the organ it is best controlled by filling the bladder with hot saline solution. It is, of course, out of the question to attempt to ligature vessels in this situation. The wound in the bladder need not be sewn up. A large empyema tube is fixed in the supra-pubic wound with tapes, and the operation is complete.

The after treatment will be considered in a succeeding article.

LARYNGOLOGY AND RHINOLOGY.

SPASM OF THE GLOTTIS.

THE effect of spasmodic contraction of the laryngeal muscles is to produce adduction of the cords; for the abductor muscles, which probably participate in the contraction, are overcome by the more powerful adductors. In addition to the adduction of the cords there is closure of the ventricular bands, and probably also, in any strong spasm, contracture of the upper aperture of the larynx. Experimentally, stimulation of the centripetal fibres of the vagus of one side produces a reflex adduction of both vocal cords, and stimulation of the peripheral end of the divided recurrent laryngeal nerve causes contraction of the muscles of the same side; but clinically, spasm of the glottis is always bilateral.

The causes of spasm may be distinguished as peripheral and central; and the latter may be divided into organic and functional. Peripheral causes may be situated in or near the larynx and include tumours, foreign bodies, and inflammations of the larynx or adjacent parts; more rarely the spasm is due to irritation of the nerves by an aneurysm or other growth in the neck or thorax. Central organic causes include the laryngeal crises of tabes and general paralysis. Spasm, the result of functional disturbance, is not very uncommon, is associated with hysteria and neurasthenia, and is often excited by some sexual trouble.

A typical severe spasm begins with a sensation of tickling in the throat, followed by a fit of coughing; the glottis then closes tightly and the violent attempts at inspiration are ineffectual. There is generally loud stridor; but when the glottis is completely closed there is no sound, and these are, of course, the worst cases. There is a terrible feeling of oppression and anxiety, and the patient clutches at himself or surrounding objects. As the spasm passes off the air enters with a loud crowing noise and the breathing becomes normal. There may be considerable cyanosis, and in the worst cases there is temporary loss of consciousness; but a fatal result is extremely rare unless some organic cause of obstruction is present. These attacks may recur at variable intervals for years, but tend to improve, and to cease eventually. Often the spasm is less complete, but lasts longer, so that stridor may persist for several hours.

Children are much more liable than adults to spasm of the glottis, which in them often accompanies an ordinary catarrhal laryngitis, and is then known as "spasmodic laryngitis" or "laryngitis stridula." The appearance is that of an ordinary catarrh with a cough, hoarseness, and slight fever. The attack of spasm nearly always comes on in the middle of the night, and usually recurs for the next few nights with diminishing severity. In laryngeal diphtheria the symptoms, which are also more marked at night, tend to get worse, and there is no complete freedom from dyspnoea between the attacks. In spasmodic laryngitis, again, hoarseness and catarrhal symptoms remain between the spasms, and serve to distinguish the affection from "laryngismus stridulus." This is simply spasm of the glottis, which occurs in unhealthy, ill-nourished children, usually between

the ages of six months and two years, and generally in association with rickets. It is due to an increased excitability of the nervous system, and the spasm is excited reflexly by some disturbance within the alimentary canal, such as worms or gastritis, or from the pharynx, especially from the presence of adenoids. The attack is exactly similar to the spasm already described; it begins with a few short noisy inspirations, and ends with a long crowing. It is often accompanied by carpo-pedal contractions, and the "silent" cases are the most severe. The attacks vary much in frequency, and occasionally have a fatal termination. In common with all stridulous affections it has been included under the title of "false croup," and nurses speak of it as a "passion-fit" or "holding the breath." The account of the attack may suggest epilepsy if the patient is not seen during the spasm; but in the latter respiration is not completely interrupted, there is no crowing, the mouth is clenched, and there are usually general convulsions.

Two other rare varieties of spasm may be mentioned. "Phonic spasm," or "dysphonia spastica," is an occupation-neurosis allied to writer's cramp, which affects nervous subjects, especially those engaged in professional use of the voice. On attempted phonation the cords come tightly into contact, so that no air passes out and no sound is produced. The spasm generally subsides as soon as the subject ceases to try to speak, but sometimes it persists and induces an ordinary attack of glottic spasm. In less severe cases sounds can be produced intermittently, and the vowels are often doubled, thus superficially resembling stammering.

The second variety is often incorrectly termed "laryngeal vertigo," or, more properly, "ictus laryngis." The attack begins with a cough, is followed by glottic spasm, and then by loss of consciousness, which is regained in a few seconds. There is a close resemblance to *petit mal*, but the onset is always with cough and glottic spasm; there is no after-confusion or stupor, and it occurs in people who never have any other form of fit. The affection is probably merely a variety of glottic spasm, and the loss of consciousness due to the closure of the glottis, for it is well known that forcible expiration against resistance will produce a similar effect.

Among spasmodic affections we may place the nervous cough or "barking cough of puberty"; it is of the nature of a "tic convulsif," and affects young people of both sexes. The cough is loud, single, without expectoration, and recurs persistently, ceasing during sleep or if the attention is distracted. Before making the diagnosis, any cause of irritation must be excluded, for a very similar cough may occur in patients of all ages as a result of reflex irritation. The source of irritation which causes such a reflex cough may be situated in any part of the respiratory tract, in the ear, the alimentary canal, or in the bladder. The well-known "stomach cough" is a familiar instance.

DERMATOLOGY.

ITCHING AND ITS TREATMENT.

ITCHING, or pruritus, is a prominent symptom of many skin affections. It may also occur without any skin eruption, or such skin lesions as are present may be the result of scratching. Very often it is on account of the pruritus that a patient seeks advice, rather than because of the inconvenience of any eruption, or for other symptoms. But it is the duty of the medical man, not merely to attempt to treat this symptom, but to find out the cause of it, and, if possible, to remove it.

DIFFERENTIAL DIAGNOSIS.

Always, in the presence of pruritus of whatever variety, and in whatever station of life the patient may be, it is essential first of all to exclude the parasitic affections, *scabies* and *pediculosis*. If the patient be young, one must suspect scabies; if elderly, pediculosis. Some indication of the presence of either of these affections will be given by the nature of the eruption and its distribution. An ill-defined scratched papular eruption involving more or less of the whole body below the neck suggests scabies. Scratched papules and scratch-marks on the skin of the back in an elderly person suggest pediculosis.

But to diagnose these complaints with certainty it is necessary to find the typical burrows in the case of scabies—about the wrists or fingers or sides of the feet, and on the penis in men—and the pediculus in pruritus of old people, in the folds of the linen about the neck.

When these parasitic affections have been definitely excluded, we must next examine the eruption to make out whether it is one or other of the more common eruptions which are accompanied by pruritus. We think of *eczema*, of *lichen planus*, of *urticaria*, and in children of *lichen urticatus*. If the eruption be eczema, we see the characteristic red, oedematous skin, cracked and oozing, or studded with pin-point erosions, vesicles, or crusts. If it be lichen planus, we have the violet-coloured, flat-topped, angular papules of this eruption, situated especially about the wrists and the inner sides of the knees. In urticaria we see the well-known wheals. In lichen urticatus, the papule with erythematous or urticarial halo. But it must not be forgotten that eczema may be the result of scabies, especially of scabies that has been over-treated with sulphur ointment; nor that, occasionally, scabies and lichen planus may be present together in the same patient; and that urticaria may accompany both scabies and pediculosis.

Having now excluded all of these affections—scabies, pediculosis, eczema, lichen planus, urticaria, lichen urticatus—we must next endeavour to find out whether the itching depends upon some general condition. We know that a common cause of pruritus is some passing *gastro-intestinal disturbance*, that pruritus is common in *diabetes*, in *Bright's disease*, and in *jaundice*. It may also occur in patients with *cardiac disease*, in *pregnant women*,

and—a very important fact to remember—in patients suffering from *malignant disease of the stomach or liver*. All these points should be carefully investigated before attempting to prescribe for this symptom.

There are two other less common causes of pruritus which one has to bear in mind, but which can scarcely be diagnosed with certainty until the patient has been under observation for some time. These are *dermatitis herpetiformis* and the early stage of *mycosis fungoides*. *Prurigo of Hebra*, a common cause of life-long pruritus in Vienna among the poor, is seldom met with in this country.

TREATMENT.

Having made the diagnosis of scabies or of pediculosis, the treatment is aimed at the cause of the disease, and the well-known applications for these complaints generally quickly remove this troublesome symptom. In scabies, however, a good deal of itching may be complained of even after the disease is cured. This is generally speedily removed by a mild tar lotion. The treatment of eczema need not be entered into here. In lichen planus and urticaria the same applications are useful as in pruritus from other causes. In pruritus dependent upon the disturbance of the digestive functions the bowels must be regulated and careful attention given to the diet. Alcohol, coffee, and any particular kind of food which has been found to disagree must be avoided. Appropriate treatment for diabetes and albuminuria will generally relieve the itching which occurs in these conditions. Cardiac cases find relief from small doses of digitalis.

There are certain empirical remedies which have been found useful in obstinate cases, or as temporary measures in all cases. These are: quinine in large doses; antipyrin, in doses of gr. v., gradually increased. Pilocarpin, gr. $\frac{1}{16}$ to $\frac{1}{8}$, by the mouth when the itching is most troublesome. The good effect of this remedy is often very striking. *Canabis indica* is recommended in the pruritus of old people, in doses of 5 to 20 m. well diluted, three times a day, after food.

In all cases local applications are useful, and the list of such applications is a long one. Among the most useful are lotions containing liquor picis carbonis (5j. ad 3x.), acidum carbolicum (m℥l. ad 3x.), sanitas 3ss. ad 3x.). Alkaline lotions: bicarbonate of soda or borax 5j. to 3x., with or without a few drops of dilute hydrocyanic acid; lotions containing a powder in suspension, oxide of zinc, calamine, talc. Or a powder may be suspended in the tar or alkaline lotion. Sometimes cold sponging with vinegar and water, or with alcohol and ether, followed by powdering with starch powder, gives relief. Lotions may be conveniently applied by means of a spray. A lotion of perchloride of mercury (gr. v. ad x. ad 3x.) is cleanly and odourless. It is useful to bear in mind several prescriptions, for often one relieves where another fails.

RESIDENT MEDICAL OFFICERS' DEPARTMENT.

OUT-PATIENT OPERATIONS.

THE out-patient operating theatre is nowadays an essential part of a modern general hospital, and it makes a large claim upon the time of the house surgeon. The variety and extent of the operations performed there would probably astonish one whose personal acquaintance with hospital routine closed, say, fifteen years ago. There are quite a number of operations for which the out-patient theatre or operating room is the proper place; but there are others of about the same extent and importance, for which it is not. In other words, the out-patient theatre has limitations, often transgressed by the inexperienced, which are worthy of definition and observance.

In the large general hospitals of big towns this department falls, as a rule, to the assistant house surgeon, for whom the assistant house physician acts as anæsthetist. Under this system both officials may gain experience of their respective duties, and acquire by humble beginnings dexterity and sound technique. In the main, also, it is for the best advantage of patients; for if senior house officers undertook these duties some more responsible tasks would fall to the lot of the juniors, where their inexperience would be a greater detriment.

Now aseptic surgery and the enormous improvements in surgical teaching which have taken place during the last few years have made it an every day occurrence for comparative novices to attempt fairly extensive operative surgery with highly successful results. And as far as the actual operation itself goes, the junior house surgeon at a hospital can usually be trusted to do excellent work in the out-patient theatre; since what he may lack in years he makes up for by energy and enthusiasm. But it sometimes happens that he undertakes tasks for which the out-patient department is not a fit place, and that his results suffer in consequence.

Let us first consider the preparation of the patient. At many hospitals he is given a printed notice filled in with the exact date and hour at which he is to attend, and enjoining on him the necessary purgation and abstinence from food for the required number of hours. Yet however explicit this leaflet may be there are many patients too careless to study it, too ignorant to understand it, or too incredulous to obey its directions. On no account should the operator or, better still, the anæsthetist fail to inquire the time of the last meal. To the working classes a meal means a somewhat extensive repast; a bun and a glass of milk for a child, or beer and bread and cheese for an adult, are regarded as too insignificant to deserve mention. Another point of importance is to ensure that the patient has an opportunity for micturition immediately before entering the operating room.

Anæsthetic after-effects must be obviated if possible, since the patient has to return home on the day of operation. By preference gas should always be used, unless a local anæsthetic will suffice; failing this, ethyl chloride may be enough for many

small operations which yet cannot be completed satisfactorily under gas. There are, however, some very brief operations for which gas is unsuitable. Thus any condition about the anus, such as a thrombosed pile needing incision, usually calls for etherisation, no matter how brief the operation; for under gas the first manipulation of this region is apt to produce almost opisthotonic spasms. For breaking down adhesions, also, gas is seldom satisfactory.

For longer operations the gas-ether sequence is advisable. The effects of a short etherisation pass off fairly quickly, especially in a robust man accustomed to alcohol; and there are other reasons for the choice of ether in preference to chloroform or a chloroform mixture. Ether by the open method is hardly likely to be necessitated in the out-patient theatre by the patient's condition, but there would be no other objection to it than the loss of valuable time which it entails during induction. In certain circumstances gas and ether are both contra-indicated; the general principles of selection of an anæsthetic must be remembered, but amongst out-patients chloroform is most frequently indicated for suppurations in the neck and about the floor of the mouth.

Turning now to the operations themselves, it is of very doubtful expediency to do any but the simplest upon the lower limbs. An ingrowing toenail or a perforating ulcer may legitimately be attacked; and, of course, abscesses if not too large. But cellulitis, tenotomy, and patellar bursæ call for in-patient treatment. However carefully a leg may be splinted, it cannot receive proper rest, when on the day of operation the patient has to get home, where he cannot be nursed.

Once the broad principles of selection are grasped, the house-surgeon whose enterprise and resource are equalled by his care in preparation and after-treatment, may add appreciably to his list of out-patient operations. Thus excision of the interphalangeal joint for hammer toe is quite feasible if a neat metal splint to go under the toe is ready, and a generous dressing is encaised in a large carpet slipper. Foreign bodies—chiefly pins and needles trodden on—are also practicable if located immediately beforehand by the x-rays.

Of buboes and phimosia it is hardly necessary to speak. They constitute a large percentage of out-patient work; and the latter as a whole are as satisfactory as the former are disappointing. Mammary abscess should not, as a rule, be opened under gas or ethyl chloride. There are few suppurative lesions so apt to become intractable if not thoroughly dealt with at the first operation. Full etherisation and methodical incision of every pocket of the abscess which can be found, with free drainage and constant care in the after-treatment will generally be rewarded with success. Tonsils and adenoids form another of the principal groups of out-patient cases. To attempt both under gas only is not very much to be recommended, even for the

practised operator; but ethyl chloride generally gives a long enough anæsthesia for the purpose. Iced water, with which to sponge the child's face after the operation, is useful in hæmorrhage.

On the arms the house surgeon may perform a number of operations which are contra-indicated on the leg; for here complete rest ought to be ensured by appropriate splinting, and the inclusion of abundant wool in the dressings. Thus an olecranon bursa may well be excised in the out-patient theatre, though the corresponding condition of the patella ought to be admitted to a bed. So, too, needles may be sought for even when quite deep in the hand or arm, whereas only those which are fairly superficial should be attempted in the lower limb. Ganglion is another condition which may be radically treated if the operator has complete confidence in his

aseptic or antiseptic technique; and amputations of the fingers, suture of tendons after injury, compound fractures of the bones of the hand, and so on, may be fearlessly operated on. So may, as a rule, the small fibro-adenomata of the breast which occur in women about the ages of twenty to twenty-three; but these tumours should always be submitted to the pathologist for section. Lipomata, even of large size, are also generally suitable for excision, and should either be drained for forty-eight hours or the recesses of the cavity drawn together with a buried suture. There are very many other operations of minor surgery for which the out-patient theatre is nowadays appropriate, but even the brief list enumerated includes many which only a few years ago no one would have dreamt of undertaking, except upon in-patients.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

PRACTICAL POINTS IN CHILDREN'S FEEDING.

By D. M. MACDONALD, M.D., D.P.H., Dunkeld.

WHEN it is necessary to hand-feed a baby, it should be remembered that no child under one year, sometimes more, requires undiluted milk. For the first month of life the meal should be in the following proportions: Milk, two tablespoonfuls; barley water, two and a half tablespoonfuls. In the second month three tablespoonfuls of each; in the third, four tablespoonfuls of barley water to five of milk. This applies to healthy children, but if the child is weakly one may give one tablespoonful of milk for each month, diluted.

Besides barley water one may use lime water. The advantage of the former is that, being of a mucilaginous nature, it causes a softer matrix of curd, and it is laxative, whereas the tendency of cow's milk, especially when boiled, is the other way. The proper preparation of barley water is not unimportant. Two teaspoonfuls of prepared barley are mixed with a little water to form a smooth cream, a pinch of salt is added, and then a pint of water. This is poured through a fine strainer into an enamelled saucepan and boiled a quarter of an hour, allowed to cool, then skimmed. (For invalids a little lemon juice added makes a useful demulcent drink.)

Occasionally one has recourse to humanised milk—that is, milk deprived of a proportion of casein with all the fats retained. To prepare it, remove the cream and then divide the milk into two parts, A and B. Treat B with rennet until curdled, bring to the boil, and strain; add B along with the whey to A and the cream. In this way the product contains the sugar and fat in full proportion and the casein in half. Sterilised milk is obtained by heating to 212° F. for one or one and a half hours; pasteurised milk by heating to 155° F. or 170° F. for half an hour. Peptonised milk is obtained by adding the contents of a tube or tablet of pepsin to a certain quantity of milk, which is kept at a warm temperature for 20 minutes; fermentation is then

arrested by boiling. If kept longer than 20 minutes before boiling the milk becomes bitter and unpalatable.

It is a good rule to prohibit all food other than milk to children without teeth. The temperature of the food should be 95°, and the feeding-bottle of the boat-shaped order, which is easily kept clean. It is also a good plan to have two bottles and to place the one not in use in a cold solution of boric acid. Sterilised, humanised, peptonised, and pasteurised milks have one point in common: they are all prone to produce anæmia, and should be regarded as temporary expedients.

When the milk constipates, a piece of manna dissolved in the milk once a day or in two days will obviate the necessity for dosing with castor oil, etc. Later on certain adjuncts to food are to be considered. The coarser variety of oatmeal often has the opposite effect desired by worrying the bowels and making them more obstinate, or by causing diarrhœa. Gravy is useful; bread may be steeped in it, or mashed potato. The gravy is best prepared from fresh meat; if from other sources, it should be allowed to stand, the fat skimmed off, then warmed.

Raw-meat juice is very good and may be prepared by scraping the surface of raw meat with a blunt knife, then placing in a jar with some lukewarm water and allowing to stand in a cool place two or three hours. Then take the shredded meat and press through muslin into the water in which it was previously. In hot weather it should be prepared daily.

Milk puddings are excellent, but pastry is to be avoided; mutton broth, too, is useful, and at three years suet puddings. Condensed milk abroad is frequently the only means of obtaining milk. In this country it is more frequently a convenience than a necessity. Given alone for some time it may give rise to rickets; this may, however, be largely or entirely obviated by combining it with mutton broth or beef juice.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

FIRE APPLIANCES FOR USE IN HOSPITALS.

II.—AUTOMATIC FIRE EXTINGUISHERS AND LIFE-SAVING APPARATUS.

IN addition to those described in the previous article, another class of apparatus has been gradually developed, designed to come into operation automatically should the temperature at any part of a building rise above a certain figure. The appliances were originally worked out for use in the Lancashire cotton mills, but they have gradually been adopted by a number of buildings in which other industries are housed. Flour mills, for instance, have adopted them very largely, and also the large co-operative buildings that are rising in different parts of the country, and in America schools have adopted them. The apparatus is arranged to produce what is practically a shower bath, a fine spray of water, covering a comparatively wide area, in the neighbourhood of the spot where the rise of temperature occurs. The idea underlying the design is that in a great many buildings fires occur at night, or may break out in portions of a building where no one is present at the moment, and get a firm hold of the building before they are discovered. In such cases the rise of temperature opens a valve, through which the spray of water mentioned is forced, drenching everything in the immediate neighbourhood. The apparatus has the double advantage that it comes into operation during that critical early period when it is possible, if ever, to stop a serious fire, and the damage by water, which is often more serious even than that from fire, is confined to the immediate neighbourhood. In the case of hospitals the portions of the building to which the appliances could be adapted would require very careful consideration. But there is a large part of all hospital buildings where they might with advantage be used. The portions of the buildings referred to are those where, under modern conditions, fire is very likely to break out. All modern hospitals have heating plant, usually boilers, furnaces, and various apparatus, in which high temperatures are dealt with, and it is common knowledge that carelessness on the part of those employed sometimes leads to serious fires under similar conditions. The automatic appliances are known as "sprinklers," the Grinnell, made by Messrs. Mather & Platt, of Salford, being the one best known on both sides of the Atlantic. The building to be protected is piped, just as for a gas or water service, but the pipes which are to supply the "sprinklers" are fixed under the ceilings. The system of pipes is connected either to the town supply, to a large tank overhead, to a water service worked by a pump which also comes into operation automatically, or, as it is preferred in some cases in America, to a tank fixed on an elevation at a little distance from the building. The valve is held closed under ordinary conditions by two strips of metal soldered together. The solder can be made to melt at any temperature, the usual figure being 155° F., which gives early warning of danger. On the arrival of that temperature the solder melts, the strip gives way, the valve opens, and the shower-

like spray comes into operation, a large alarm bell usually ringing at the same time. A modification of this arrangement is used to protect buildings from fires taking place in neighbouring buildings—another important matter. Pipes are laid on the outsides of the buildings, near the roof, and are fitted with valves, either arranged to come into operation automatically, if the temperature in the neighbourhood rises, or to be operated by hand from some convenient spot. The pipes are connected to the water service, and, when in operation, a water screen is formed which efficiently cuts off sparks, flames, etc.

In the case of hospitals, a more important matter is the question of saving life in case of fire. Most modern hospitals are fitted with iron ladders outside the buildings, through which the inmates of the upper stories can escape, but in certain cases it will be remembered that even these cannot easily be used. Patients could hardly get down them, and in the case of hospitals not so provided, other means are required. The firms who have made a speciality of fire-fighting appliance, Messrs. Merryweather and others, have also worked out apparatus of various forms for rescuing patients, and others on the upper stories. A number of apparatus have been developed, by the aid of rope and canvas. A great deal can be done with a rope by those who know how, if some support can be found for it on the floor from which rescue is to be carried out. Brackets, hooks, and other appliances are arranged to be fixed in each floor, near the different windows, and ropes with pulleys attached, and with chairs, hammocks, what sailors call "bowline on the bight" knots, and other arrangements are made to support patients and others. For those who are able to hold on to a rope, while seated in a chair, the matter of rescue is very simple, provided that a convenient support for the pulley in which the rope runs can be found. Where no other support is available, one or two bedsteads drawn close up to the window, and the rope attached to the pulley taken round them, are usually sufficient. The patient to be rescued is placed in the chair, or in the knot mentioned, which is arranged like a chair, one loop for him to sit on, and another loop under the arms, or in the hammock and is lowered, either from above or below. In another set of apparatus canvas shoots are provided, held to brackets, or other supports, at the window from which rescue is to take place, the lower ends being held as far out from the building as possible by those in the street. The person to be rescued is placed in the shoot at the window, and slides down to the bottom, if everything is properly arranged, without harm. Of course, the utility of all of these apparatus, as well as of the portable fire extinguishing machines described in the previous article, depends upon their being on the spot when wanted, and upon there also being present someone with a cool head who understands the appliance.

EDITOR'S LETTER-BOX.

THE VIVISECTION COMMISSION'S REPORT.

To the Editor of THE HOSPITAL.

SIR,—The Committee of the Research Defence Society have asked me to send you a copy of a letter which has been sent to the Secretary of State for Home Affairs, as follows :—

“Research Defence Society, 70 Harley Street, W.
May 26, 1909.

To the Rt. Hon. Herbert J. Gladstone.

Sir,—We desire, as members of the Research Defence Society, to call your attention to the following facts. The Royal Commission on Experiments on Animals was appointed in 1906. It began to hear evidence in October of that year; and during 1906 and 1907 a great amount of evidence was given by many witnesses. So long ago as December 18, 1907, the Commissioners decided that they did not wish for any further evidence; but they met once more, on March 25, 1908, to hear evidence on a special point. Apart from this one meeting in 1908, it is now nearly a year and a half since the Commissioners ceased to hear evidence; but they have not yet issued their report. We are of opinion that this long delay is contrary to the public interest, and is likely to prejudice the public mind. We, therefore, beg you to exercise all your influence to hasten the issue of the report.”

The letter has been signed by the Earl of Cromer, President of the Society; the Hon. Sydney Holland, Chairman of Committee; the Duke of Abercorn, Lord Avebury, Lady Bliss, Lord Robert Cecil, Lord Cheylesmore, Sir Savile Crossley, the Hon. Walter Guinness, Sir Edwin Ray Lankester, Sir Frank Lascelles, Mr. Frederick Macmillan, the Earl of Malmesbury, Sir Patrick Manson, the Duke of Montrose, the Dean of St. Patrick's, Lord Rothschild, Mrs. Scharlieb, Professor Starling, Sir Reginald Talbot, Sir Frederick Treves, the Duke of Wellington, and the Bishop of Winchester.

I remain, your obedient servant,
STEPHEN PAGET, Hon. Sec.

ANSWERS TO CORRESPONDENTS.

C. F.—The case of diabetes mellitus on which you ask our opinion and advice is decidedly of interest, and we congratulate you upon the progress the patient is making. Under the circumstances it would probably be unwise to alter any part of your treatment, lest the course become less favourable. At the same time, temporary improvements, considerable in degree, are not at all uncommon in diabetes, even when the patients are quite young, and we are afraid that we none the less regard the prognosis as decidedly grave. It is impossible to guarantee that such a patient will live even for months, still less for years. In older persons diabetes often continues for many years, but in young persons, even when there is temporary improvement, the end nearly always comes comparatively soon. More important than the urinary sugar to our minds is the question of acidosis, as tested for by the perchloride of iron test for diacetic acid, or by Legal's test for acetone in the urine, or as actually measured by the amount of combined ammonia in the urine. In a person who is taking aspirin or sodium salicylate there are fallacies in the diacetic-acid test, and we would recommend rather that you employed the sodium nitro-prusside (Legal's) test for acetone periodically. You will find this described in any hand-book upon clinical tests, such as French's "Medical Laboratory Methods and Tests" (5s.), or Hutchison and Rainey's "Clinical Methods" (10s. 6d.). So long as your

patient has no acetone in her urine, you need not fear danger, even though the sugar should increase. If, as is more likely, she already has acetonuria, we should advise that you send specimens to some laboratory for estimations of the ammonia, say once a fortnight, because the greater the amount of combined ammonia in the 24 hours' urine, the greater the danger of coma.

NEW APPLIANCES & THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

KALZEN.

A. ROWAN AND BROTHER, Limehouse, London, E.

WE have received preparations of a new disinfectant to which the name "Kalzen" has been given. This substance has been supplied to us in three forms—namely (1) a brownish liquid, (2) a fine powder soluble in water, (3) a fine powder insoluble in water. In addition to these, we have also received a Kalzen soap, which is strongly disinfected and makes a good lather. The antiseptic powder of Kalzen has been submitted to a severe series of bacteriological tests which have proved it to possess a very high bactericidal co-efficient. According to these experiments, it is from 10 to 60 times as effective as pure carbolic acid, according to the organism against which it is tested. In the dilution required it is non-poisonous, and even in more concentrated form it is not sufficiently toxic to be dangerous in the household. It is guaranteed not to burn, stain, or discolour.

OBITUARY.

DR. SIMEON HOLGATE OWEN, M.D.(Q.U.I.), M.R.C.P. (Lond.), died recently at Manchester at the age of 64. He was consulting physician to the Manchester Northern Hospital for Women and Children, and ex-president of the Manchester Clinical Society. He qualified at the Royal College of Surgeons and the London Society of Apothecaries in 1869, and held appointments for some years at the Manchester Royal Infirmary. Dr. Owen was the author of "Fevers: Their Nature and Prevention" and "Work and Recreation in their Relation to Health."

THE death is announced of Dr. William Wotherspoon Ireland, the distinguished Scottish alienist, at his residence at Musselburgh. Dr. Ireland was a member of the Psychiatric Society of St. Petersburg, of the New York Medico-Legal Society, and of the Società Freniatria Italiana. For many years he held the post of medical superintendent of the Scottish National Institution for the Education of Imbecile Children, and medical officer of Miss Murray's Institution for Girls at Prestonpans. Dr. Ireland was at one time attached to the Indian Army, and was the author of a history of the siege of Delhi.

THE Duke of Northumberland, President of Middlesex Hospital, presided over the last meeting of the Court of Governors, when Major-General Lord Cheylesmore called attention to the exceptionally straitened circumstances in which the hospital finds itself. Ten or twelve subscribers have written that, owing to the Budget proposals, they would not be able to subscribe any longer. Mr. Pearce Gould said that the medical school, in view of the increasing employment of radium as a therapeutic agent, needs a larger stock for use upon cancer patients, since there is no doubt that it has a power over certain growths.

NEWS AND COMING EVENTS.

DR. GEORGES DRÆYER, M.A.Oxon, M.D. Copenhagen, Professor of Pathology in the University of Oxford, has been elected a member of the Danish Royal Academy of Letters and Science.

DR. EDWARD LIVEING, M.D.Cantab., F.R.C.P., has resigned the registrarship of the Royal College of Physicians of London, which he has held for the last twenty years. The Council has placed on record its appreciation of the devotion and energy with which Dr. Liveing discharged the duties of his office during so many years.

THE Annual Welsh Medical Dinner will be held at the Criterion Restaurant, London, on Tuesday, June 15, when the chair will be taken by Dr. D. C. Lloyd Owen, of Birmingham, at 7.30 p.m. The date has been selected for the convenience of those who will be visiting London for the National Eisteddfod.

MR. GRAFTON ELLIOT SMITH, Professor of Anatomy in the Government School of Medicine, Cairo, since 1900, has been appointed by Manchester University to the Chair of Anatomy, which has been held for the last 24 years by Professor Young, lately resigned. Mr. Smith was educated at the University of Sydney, New South Wales, and qualified in 1893. He was appointed successively Demonstrator in Anatomy and King Travelling Fellowship in the University of Sydney. Proceeding to England, he continued his anatomical research work at Cambridge, and obtained a Fellowship of St. John's College, and a University Demonstratorship of Anatomy.

THE fourteenth annual meeting of the Guy's Hospital Ladies' Association was held last week under the presidency of Princess Christian of Schleswig-Holstein. Steady progress and an improved financial position were reported, and the zeal of the twenty-two branches in sending several hundreds of garments was commended. The Victoria Ward of eight beds, maintained by the Association, has just been completed and is now ready for occupation, and the junior branch is being reorganised with a view to the maintenance of a cot by juvenile supporters. Miss Swift, the matron, gratefully acknowledged the help rendered by the Association, and Mr. Cosmo Bonsor, the treasurer, dealt with the training of nurses at Guy's Hospital.

A DISPUTE, with reference to "Ancient Lights," which has arisen between the Governors of Westminster Hospital and the trustees of the Wesleyan Twentieth Century Fund, who are erecting a memorial hall on the site of the old Aquarium, recently came before Mr. Justice Joyce in the Chancery Division. Mr. Slater, the architect appointed by the judge, reported that if the proposed plans for the hall are carried out the access of light to a number of wards in the hospital will be considerably interfered with, and the recovery of patients would thereby be prejudiced and retarded. The Hospital Governors, through Mr. Hughes, K.C., asked for a speedy trial of the action, and in the meanwhile for an injunction restraining the defendants from building to a greater height than that of the demolished Aquarium. The defendants challenged Mr. Slater's report, claiming the right, enjoyed by the last owners, to build to a height of 52 feet, and they asked that the case should stand over until the Michaelmas Sittings. His Lordship granted the injunction, adding that an early trial was clearly desirable.

A MEETING of the Socialist Medical League was held under the chairmanship of Dr. Salter, L.C.C., at the Holborn Restaurant, London, on June 3, when Dr. J. J. Robb opened a discussion on The Nationalisation of the Medical Profession.

THE members of the Council of the Royal College of Surgeons of England who retire this year by rotation are Mr. A. W. Mayo Robson, Sir W. Watson Cheyne, and Mr. R. Clement Lucas. It is understood that Mr. Harrison Cripps and Mr. W. W. H. Jessop, senior surgeon and senior ophthalmic surgeon respectively at St. Bartholomew's Hospital, intend to offer themselves as candidates at the forthcoming annual election. The list of nominations for election to the Council closed on Friday of this week.

THE British League against Tuberculosis has arisen out of the recent National Tuberculosis Conference at Caxton Hall. A large number of influential names are published in support of the League, and many medical men are upon the Advisory and Executive Committees, while Sir Thomas Oliver, M.D., is a Vice-President. The main objects of the League, which will shortly inaugurate branches in the principal industrial and rural districts of the United Kingdom, are, briefly, to instruct the public generally in the war against tuberculosis, on the main lines of scientific prevention and treatment, by means of lectures and demonstrations, and to arouse public opinion on the dangers of the communicability of tuberculosis from animals to man through diseased meat and milk. Special efforts will be devoted to active propaganda through educational and local governing bodies.

THE TUBERCULOSIS EXHIBITION AND CONGRESS.

The National Association for the Prevention of Consumption and other Forms of Tuberculosis is now holding a free Tuberculosis Exhibition for the education of the public, and more especially its poorer sections, at the Art Gallery, Whitechapel, and it will remain open until June 19. On June 2 the opening address was delivered by the President of the Local Government Board, Right Hon. John Burns, M.P., and on June 8, 9, and 10 a Conference will be held, beginning at 11 a.m. each day. June 8 will be devoted to "The Detection of Consumption," and papers will be read by Dr. Scurfield, Medical Officer of Health, Sheffield; Dr. Philip, Physician to the Royal Victoria Hospital for Consumption, Edinburgh; and Miss Cummins, Lady Almoner, St. Thomas's Hospital. "The Treatment of Consumption" will occupy June 9, and Dr. Arthur Latham, Physician to St. George's Hospital; Dr. Paterson, Superintendent, Frimley Sanatorium; Dr. Walker, Medical Superintendent, East Anglian Sanatorium, Nayland; and Dr. H. W. McConnel will read papers. June 10 will be devoted to "The Prevention of Consumption," and the papers will be read by Dr. Duncan Forbes, Medical Officer of Health, Brighton; Dr. E. W. Hope, Medical Officer of Health, Liverpool; and Dr. J. Edwin Squire, C.B., Senior Physician to Mount Vernon Hospital for Consumption; while at 3 p.m. a demonstration of meat inspection will be given by Mr. J. King, M.R.C.V.S., Chief Veterinary Inspector, Metropolitan Cattle Market. Evening lectures, at 8 p.m., form a feature of the exhibition, and the lecturers include: Dr. C. Theodore Williams, Dr. Frederick Rose, Dr. Newsholme, Medical Officer to the Local Government Board, Professor G. Sims Woodhead, Dr. Hector Mackenzie, and Dr. Nathan Raw.

WITH a view to raising part of the sum of £95,000 required to complete the removal fund of King's College Hospital, a carnival is to be held at the Crystal Palace on July 1. Mr. George Heyer, the Appeal Secretary, has ordered 300,000 tickets, and he now hopes to order 1,000,000, since the South-Eastern and Chatham and the Brighton offer return tickets to London on July 1 at one fare and a quarter to holders of shilling carnival tickets.

THE annual meeting of the Birmingham Medical Benevolent Society was held at the Midland Hotel on May 25. Dr. Malet, the retiring president, occupied the chair, and was supported, among others, by Sir James Sawyer and Sir Thomas Chavasse. The eighty-seventh annual report states that the invested funds of the society amount to £15,940, with a balance of £120 9s. 7d. at the bank. The annual value of the grants ranges from £18 to £36, and the sum expended in this way during 1908 was £757. The total number of benefit members of the society at the end of the year was 390. The chairman moved the adoption of the report, and Sir James Sawyer, in seconding the resolution, complained of the apathy of members of the profession towards the society. Notwithstanding that there are about 4,000 medical men in the area covered by the society only 400 are members of the organisation. Sir Thomas Chavasse was elected president and Dr. Simon president-elect. A motion by Dr. Thomas Wilson to amend the rules of the society so as to admit as members lady practitioners was carried.

IN connection with the annual grant voted by Parliament in aid of scientific investigations concerning the causes and processes of disease, the President of the Local Government Board has authorised the following special researches: (1) A continuation of the investigation into protracted and recurrent infection in enteric fever, by Dr. Theodore Thomson, Medical Inspector of the Board, in conjunction with Dr. Heddingham, of the Lister Institute. (2) A continuation of the investigation into protracted and recurrent infection in diphtheria, by Dr. Theodore Thomson and Dr. C. J. Thomas. (3) A continuation of the investigation into flies as carriers of infection by Dr. Monckton Copeman, Medical Inspector of the Board, and by Professor Nuttall, of Cambridge. (4) A continuation of Dr. Andrewes's investigation on the presence of sewage bacteria in sewer air, with a view to ascertaining their number and the distance they can be carried by air currents. Also a continuation of Dr. Andrewes's investigation into the part played by changes in bone marrow in the defensive mechanism of the body against infection. (5) A continuation of Dr. Savage's investigations on the bacterial measurement of milk pollution, and on the presence of the Gaertner group of bacilli in prepared meats and allied foods. (6) An investigation into the chemical and physical changes undergone by milk as the result of infection by bacteria, and into the relation of the pancreas to epidemic diarrhoea, by Dr. Schölberg and Mr. Wallis, of University College, Cardiff. (7) An investigation of the records of charitable lying-in hospitals as to the nutrition of the mother and other factors influencing the vitality of infants and their progress in the first 14 days of life, by Dr. Darwall Smith, physician to the British Lying-in Hospital. (8) An investigation into the occurrence and importance, in relation to treatment, of mixed infections in pulmonary tuberculosis, by Dr. Inman, pathologist to the Brompton Hospital for Consumption. (9) An investigation on the relative importance of certain types of body-cells in defence against the tubercle-bacillus, and the effect of tuberculin and other remedial agents on their activities, by Dr. J. Hiller, pathologist to the General Hospital, Birmingham.

DR. D. EDGAR FLINN, medical inspector under the Local Government Board of Ireland, and Dr. W. J. Howarth, M.O.H., have been elected Fellows of the Royal Sanitary Institute.

A SPECIAL meeting of the Council of the Charity Organisation Society will be held on Monday, June 28, at 4.30 p.m. at Denison House, Vauxhall Bridge Road, S.W., where Miss Amy Hughes, of the Queen Victoria Jubilee Nurses Institute, will read a paper on "Provident Nursing." Sir Alfred Lyall, G.C.I.E., K.C.B., will take the chair, and the Right Rev. the Bishop of Islington will speak.

It is announced that Mr. John Beresford-Leathes, M.B., B.Ch.Oxon, F.R.C.S.Eng., Lecturer on Physiology at St. Thomas's Hospital Medical School, has been appointed Professor of Chemical Pathology in the University of Toronto. Mr. Leathes, in addition to his appointment at St. Thomas's Medical School, has also been in charge of the Laboratory for Pathological Chemistry at the Lister Institute.

THE CONGRESS ON ALCOHOLISM.

THE forthcoming Twelfth International Congress on Alcoholism, to be held this year in London from July 18 to 24, has already been announced in our columns. We have now received a draft programme of the proceedings, and other particulars. The Congress, of which H.R.H. the Duke of Connaught is honorary president, and Lord Wear-dale acting-president, proposes to consider the causation, prevention and cure of alcoholism, from their individual and national aspects, by the light of research and experience in the problem of inebriety. On Sunday, July 18, the Official Sermon will be preached by the Bishop of Croydon at the afternoon service in St. Paul's Cathedral. The headquarters of the Congress will be the Imperial Institute, South Kensington, while the sittings will be held close by, in the Kensington Town Hall, at the Imperial Institute, and at the Victoria and Albert Museum. On the Monday morning the Inaugural Address will be given by the acting-president, and in the afternoon the Exhibition will be opened by the Dean of Hereford, Chairman of the Conveners, while the evening will be devoted to the Official Reception. During the week a Reception of medical members by the British Medical Temperance Association will be held at the London Temperance Hospital. The scientific side of the Congress will occupy Tuesday, Wednesday, and Friday of the week. Papers will be read by Prof. Taav. Laitinen, M.D., on "The Influence of Alcohol on Immunity," and "A Further Contribution to the Study of the Influence of Alcohol on the Degeneration of Human Offspring"; Dr. A. Holitscher, Karlsbad, on "Alcohol in Lobar Pneumonia and Enteric Fever" and "The Consumption of Alcohol in Hospitals and Asylums"; Dr. Legrain, Paris, on "Alcohol and Insanity," and Dr. Stein, Budapest, on "Alcohol and the Nervous System." Amongst the papers to be read by British scientists will be "Alcohol and Temperance," by Professor Sims Woodhead, M.D., Cambridge; "The Action of Alcohol on Muscular and Mental Fatigue," by Dr. W. H. R. Rivers, F.R.S., Cambridge; "The Resistive Power of the Brain Against Alcohol," by Professor Clouston, M.D., Edinburgh; and "The Effects of Alcohol on the Nervous System as Exhibited in Hospital and Asylum Practice," by Dr. F. W. Mott, F.R.S., London. The treatment, prophylactic as well as remedial, of the diseases of alcoholism will be discussed on the last two days. The papers will include "Treatment of the Criminal Inebriate," by Professor Aschaffenburg of Cologne, and "Legislation for the Inebriate," by Dr. R. W. Branthwaite, H.M. Inspector under the Inebriate Acts.

NURSING ADMINISTRATION.

EXTRAVAGANCE IN THE TRAINING SCHOOL.

THERE are grave difficulties in regard to the practice of small economies in institutions. Expenditure on details which in a private house would appear the height of extravagance is necessary in hospitals, because time must be saved, and time is far more costly than lint. In the use of materials the quantity must be sufficient, with a margin, and it obviates difficulties to use the best. And so nurses, after they leave their training school, incur the imputation of being extravagant persons, and few who have known illness in their own houses would be prepared to dispute this generalisation. Is it quite impracticable under the admitted drawbacks of the big institution to teach probationers the meaning of economy? It is one of the anomalies of hospital life that a probationer may be trained in an institution wherein strict economy is practised as a duty by matron and sisters, and may yet gain no insight in her pupil stages into the economic laws which govern the establishment. She may be drilled in avoidance of waste, and this in itself ought to constitute no mean preparation for the practice of economy. Yet she will know nothing about the comparative cost of the articles she uses familiarly, and in private practice she will incline naturally to believe that the most costly preparations must as a matter of course be supplied for her patient's use. Deliberate waste is one thing; lavish use of expensive things in a case of life or death is another. All nurses reprobate the first, at any rate verbally, and no formula is more constantly on the lips of those whose conversation consists of conventional tags than the expression, "If there is one thing I cannot stand, it is waste." Yet with these very words still echoing in the air, the nurse proceeds to use four times more than is necessary of a dressing which has cost four times as much as it need have done, and is unconscious all the time that she is belying her pet axiom.

Would it not be possible to teach the probationers from the beginning the cost of the things they use? In well administered institutions an effort is made to bring all the workers in the ward to a perception of the quantities they use by circulating reports each month of the articles given out under various headings, of the breakages, etc. These returns are passed from one to another, and Sister A has to compare her own rate of consumption with that of Sisters B and C. Nothing can bring home to a careless probationer her iniquities so conclusively as to let her perceive by means of such a form the extent to which isolated acts of negligence have raised the average of the ward. The sense that each deed tells in the general record of the hospital is the sense that generates responsibility. But in these returns a bare enumeration is exclusively relied upon to produce effect. Does anyone in the ward know or care how much these articles cost which were so unfortunately broken last month? Has the probationer been set to compute the money value of her depredations upon the charity? And, again, when some bandage has been (to quote Dr. Jane Walker) "ruthlessly cut," does anyone take

the trouble to set the destroyer to calculate the money damage inflicted by her reckless fingers? If probationers are to learn economy they must be taught the cost of every article they use. They must be accustomed to calculate the cost of each patient for every article, until they can tell to a fraction what is involved in doubling unnecessarily the size of a bandage, and have learned "to think in numbers." There is no other way. If they do not learn the value of the things they use while in hospital there is small chance of their gaining a sense of responsibility when attending on private patients, whose friends reluctantly consider it the height of meanness to feel the merest inclination to economise in times of illness, and where goods are ordered in profusion from chemists eager to puff the advantages of patent and costly articles. It may seem that among all the various little things which it behoves the probationer to learn in the course of three years, there is scarcely room for the lessons on prices we have advocated. And yet the number of articles in common use in the wards is not a very long one. When the probationer is padding a splint it would not be a great addition to her labours if she were expected to know its exact cost. When on duty in the out-patient department, it would stimulate her attention to detail if she were told the price of each article used, and were expected to furnish an estimate of the cost of each patient who passed through her hands. Suppose such queries as the following were set at an examination: "State the total cost to the hospital of wasting an average of four inches in length of lint per head on 100,000 patients." "Reckoning that two tablespoonsful of lotion is sufficient for treatment, estimate the quantity in quarts which would be wasted in the course of a year by pouring out double the quantity for use in an average of 30 cases every day. State the cost of this leakage." Would the candidate ever forget the importance of care in little things? We are disposed to think that such care would be greatly stimulated by labelling costly preparations with their price, and by having a table of the prices of things employed in the ward printed and hung up in the ward kitchen. It is far more effective to say "You have thrown away a shilling's worth of milk" than to say "That gallon of milk has gone sour," to warn the probationer "That dressing costs a penny an inch" rather than lavish a flood of vague injunctions against waste. The prevailing custom in all institutions of letting necessities flow, as it were, from Providence without effort or information is responsible for much of the indifference to economy characteristic of institution-trained individuals. It is a very grave defect in people who have to play their part afterwards in families pressed for means and in the throes of that most costly crisis—a serious illness. Among all the defects which are observable in the system through which private nurses are being prepared in hospitals for their duties to-day, there is none more urgently calling for rectification than this tacit initiation into extravagance.

THE
GRADUATES' MEDICAL SCHOOLS.
DIARY FOR THE WEEK, JUNE 7 TO JUNE 12.

ROYAL SOCIETY OF MEDICINE, 20 Hanover Square, W.

At 5.30 p.m.

June 8, Surgical Section. Mr. Walter G. Spencer: "Benign Tumours—fibroma, myoma, lipoma—Encapsulated in the Wall of the Stomach."

Mr. E. Stanmore Bishop: "Some Cases of Gastric Surgery."

At 7.45 p.m.

June 10, Obstetrical and Gynaecological Section. Specimens:—Dr. G. E. Purslow: (1) Uterus, with Fibroid Tumour, from a case in which Cæsarean Hysterectomy was performed. (2) Bilateral Ovarian Tumours, one of which obstructed labour on two occasions.

Dr. W. J. Gow: Cancer Originating Separately in the Uterine Body and in the Cervix.

Short communication.—Mr. J. Bland-Sutton: "Red Degeneration of a Uterine Fibroid associated with the Staphylococcus Pyogenes Aureus."

Mr. G. Darwall Smith: "An Unusual Solid Tumour of the Ovary."

Dr. Kedarnath Das: "Fæcal Chondro-dystrophia."

Papers.—Dr. J. S. Fairbairn: "Primary Chorion Epithelioma of the Ovary."

Dr. Blair Bell: "A Case of Rudimentary Uterus Didelphys, with Ectopia of each Uterine Body in an Inguinal Hernia Sac; with some remarks on the Development of the Female Genital Organs."

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

June 7, Dr. Graham Little, Skin.

At 5.15 p.m.

June 7, Dr. W. H. B. Stoddart, The Early Signs of Mental Disorder.

At 4 p.m.

June 8, Dr. Leonard Guthrie, Medical.

At 5.15 p.m.

June 8, Dr. Hector Mackenzie, Diagnostic Methods in Tuberculosis.

At 4 p.m.

June 9, Mr. E. Laming Evans, Surgical.

At 5.15 p.m.

June 9, Mr. Francis Jaffray, Appendicitis: Symptoms and Diagnosis.

At 4 p.m.

June 10, Sir Jonathan Hutchinson, Surgical.

At 5.15 p.m.

June 10, Mr. Jackson Clarke, The Clinical Examination of Spinal Cases.

At 4 p.m.

June 11, Dr. Dundas Grant, Ear, Nose, and Throat.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

June 7 and 10, Surgical Registrar, Demonstration.

June 11, Medical Registrar, Demonstration.

At 12 noon.

June 7, Dr. Bernstein, Pathological Demonstration.

At 12.15 p.m.

June 8 and 9, Dr. Pritchard, Practical Medicine.

At 5 p.m.

June 7, Mr. Baldwin, Practical Surgery—II.

June 8, Mr. Etherington Smith, Clinical Lecture.

June 9, Mr. Pardoe, Retention of Urine.

June 10, Mr. Keetley, Clinical Lecture.

June 11, Dr. Abraham, Cases of Skin Disease.

THE THROAT HOSPITAL, Golden Square, W.

At 5.30 p.m.

June 7, Mr. Faulder, Diseases of the Perceptive Mechanism.

June 10, Dr. Bond, Acute and Chronic Inflammation of the Mastoid.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

June 8, Dr. A. H. Pirie, The Use of X-rays in Injuries about the Joints.

June 10, Dr. T. R. Whipham, Demonstration of Cases of Children's Disease.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.

At 3.45 p.m.

June 8, Mr. Chichele Nourse, The Middle Ear and Labyrinth.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich, S.E.

At 3.15 p.m.

June 7, Mr. W. Turner, Accidents Complicating Operations.

At 2.15 p.m.

June 8, Dr. Russell Wells, Failing Heart.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

June 8 and 11, Dr. F. Buzzard, Forms of Paraplegia and their Treatment.

THE BEST NATURAL APERIENT WATER.

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For GOUT and RHEUMATISM.

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CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

HOSPITAL SUNDAY NUMBER.

**THE
HOSPITAL**

**NEW SERIES. No. 119, Vol. V.
No. 1,191. Vol. XLVI.**

[REGISTERED AS A NEWSPAPER.]

Sunday, June 13, 1909.

The Mount Vernon Hospital
FOR CONSUMPTION AND DISEASES OF THE CHEST.
HAMPSTEAD and NORTHWOOD.

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Telephone No.: 5585 Gerrard.

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Cheques may be sent to

WILLIAM J. MORTON,*Secretary.**Treasurer:* **ALFRED HOARE, Esq**

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FULHAM ROAD, S.W.

Patron—HER MAJESTY THE QUEEN.

Chairman—T. DYER EDWARDES, Esq., J.P. Treasurer—HENRY E. WRIGHT, Esq.

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2,300 In-patients Annually.

The Income this year has
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L. H. GLENTON-KERR,
Secretary.

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ST. MARY'S HOSPITAL is the principal General Hospital for the West and North-West Districts of London, which Districts include some of the poorest quarters of the Metropolis, and contain a population of over half a million.

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CONTRIBUTIONS may be sent to the Treasurer, or the Secretary, at the Hospital, or to the London and County Bank, Paddington Branch.

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CHAIRMAN: Sir T. VEZEY STRONG, J.P. (Alderman, City of London).

PATIENTS TREATED DURING THE YEAR 1908:

In-Patients, 1,312. Visits to Out-Patient Departments, 77,157.

ORDINARY INCOME AND EXPENDITURE DURING THE YEAR 1908:

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President - The Right Hon. LORD BALFOUR OF BURLEIGH, K.T.

The Diseases admitted are Scarlet Fever, Diphtheria, Measles and German Measles; and Typhoid when accommodation can be made available. The general ward fee is three guineas for the whole term of treatment. Private rooms, four guineas a week. Patients' payments amount to about a fourth of the annual outlay, the other three-fourths falling upon the funds of the Institution. This system encourages people who are able and willing to pay a part at least of the cost of their illness to do so rather than remain for treatment at home, or cast themselves upon the rates. No help is received from the rates by this Hospital. About 100,000 persons have been so treated.

Annual Subscribers of a guinea and upwards for more than one year are Governors, and donors of ten guineas and upwards in one sum are Life Governors. Domestic servants of Governors and certain employees of subscribing business houses, clubs and hotels are promptly removed and treated free of charge. Application to the Secretary with a medical certificate will ensure prompt admission. The application can be made personally, or by letter, telegram, or telephone: 687 North.

ADDITIONAL HELP IS VERY MUCH NEEDED.

Bankers: UNION OF LONDON & SMITHS, 50 Cornhill, E.C.

W. CHRISTIE, Secretary.

To Help the Poor Wives of the Unemployed.

The ROYAL MATERNITY CHARITY OF LONDON

(FOUNDED 1757.)

Patron: H.M. THE QUEEN.

President: H.R.H. PRINCESS CHRISTIAN.

Treasurer: Rt. Hon. LORD AVEBURY.

Vice-President: H.S.H. The DUCHESS OF TECK.

For providing Certified Midwives, Medical Attendance, and Medicines (**Gratis**) to Poor Married Women in their **Own Homes** by means of Subscribers' "letters." Nearly 3,000 are helped annually. Fixed income under £900, and annual expenditure over £2,000. **Debt to the Bank over £2,500.**

Having no Hospital, the Charity receives no help from any Hospital Funds.

Chairman: C. BARHAM, Esq., C.C.

Secretary: MAJOR G. L. B. KILLICK.

Offices: 31 FINSBURY SQUARE, E.C.

GUY'S HOSPITAL.

Ministered in 1908 to 8,565 In-Patients, and 132,288 Out-Patients.

The Treasurer desires to express the earnest hope that this great record of work will stimulate the public to supply (by annual subscriptions and donations for general purposes, or contributions and bequests to the Re-endowment Fund) the large annual deficiency of **£25,000** between assured income and necessary expenditure; and **£60,000** to provide funds for the **ESTABLISHMENT** of separate **CHILDREN'S WARDS**, the **REBUILDING OF CLINICAL HOUSE**, and the increase of Beds for Special Departments.

Guy's Hospital, London Bridge, S.E.

H. COSMO O. BONSOR, *Treasurer.*

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

SANATORIUM AND CONVALESCENT HOME, On the Chobham Ridges, nr. Frimley, Surrey.

Patrons—

H.M. The King.

H.M. Queen Alexandra.

H.R.H. The Prince of Wales.

H.R.H. The Princess of Wales.

GREATLY NEEDS HELP

to maintain the whole of the 426 Beds,
all of which are occupied.

President—

The Earl of Derby, P.C., G.C.V.O., C.B.

Chairman—

Maj.-Gen. Lord Cheylesmore, C.V.O.

Treasurer—

W. F. Courthope, Esq.

IN-PATIENTS, 1908, 1,673.

OUT-PATIENTS, 1908, 10,903.

ANNUAL EXPENDITURE OVER £30,000.

ONLY FIXED INCOME UNDER £3,000.

Every Donor of **£52 10s.**, or Annual Subscriber of **£5 5s.**, becomes a Governor, and may recommend one In-Patient and eight Out-Patients every year.

FREDERICK WOOD, *Secretary.*

EVELINA HOSPITAL (Founded 1869)

SOUTHWARK BRIDGE ROAD, S.E.

Patron - - - HIS MAJESTY THE KING.

Only large **CHILDREN'S HOSPITAL** in South London. Situated in its Poorest District.
76 COTS and a very **EXTENSIVE OUT-PATIENT DEPARTMENT.**

FUNDS URGENTLY NEEDED.

About **£8,000** must be raised **annually** in voluntary contributions for ordinary working expenses—but reliable income far short of this sum.

VISITORS TO LONDON ARE CORDIALLY INVITED TO INSPECT THE "EVELINA."

*Treasurer—*Sir JOHN MURRAY SCOTT, Bart.

*Chairman—*CHARLES WIGHTMAN, Esq.

H. C. STANILAND SMITH, *Secretary.*

NORTH LONDON OR UNIVERSITY COLLEGE HOSPITAL,

Patron—THE KING.]

GOWER STREET, W.C.

[President—The DUKE OF BEDFORD.

A GENERAL HOSPITAL WITH SPECIAL DEPARTMENTS.

OVER 55,000 PATIENTS TREATED ANNUALLY.

Annual Expenditure **£28,500**

Income from all sources **9,000**

Annual Voluntary Support Required ... **£19,500**

FUNDS URGENTLY NEEDED.

HENRY LUCAS, *Treasurer and Chairman.*

Hospital Sunday Number.

SOME HOSPITAL SKETCHES OF THE PAST

To the student of history there is nothing more strikingly evidenced by his discoveries of what was the fashion or the vogue in times past than the old saying that there is nothing new under the sun. Hospitals date, one might almost say, to prehistoric times, for there is a passage in the writings of that interesting old Pali physician, Susrutha, which points to a tradition of a nursing class long antedating his own times. Certainly we have good reasons for supposing that the ancient Chaldeans, the Egyptians of Ramesian days, the Assyrians, and, to come to more recent times, the Greeks and the Romans had special buildings for the reception and succour of the sick. The prototype of the modern hospital was

the special benefactors of doctors, apothecaries, barbers, surgeons, and cutters for the stone—not to mention bone-setters and quack salvers—contains much that to the student of history is curiously reminiscent of the old heathen patrons of medicine.

With the revival of learning there was brought about a reform in hospital life which probably was as important for the development of medicine as the struggle of Mandinus, Paracelsus, and Vesalius against the orthodoxy of the Galenists. Prior to that period the European hospital had been essentially a church institution. It was supported, endowed, founded, and managed by the Church as much as the cathedral or monastery was.

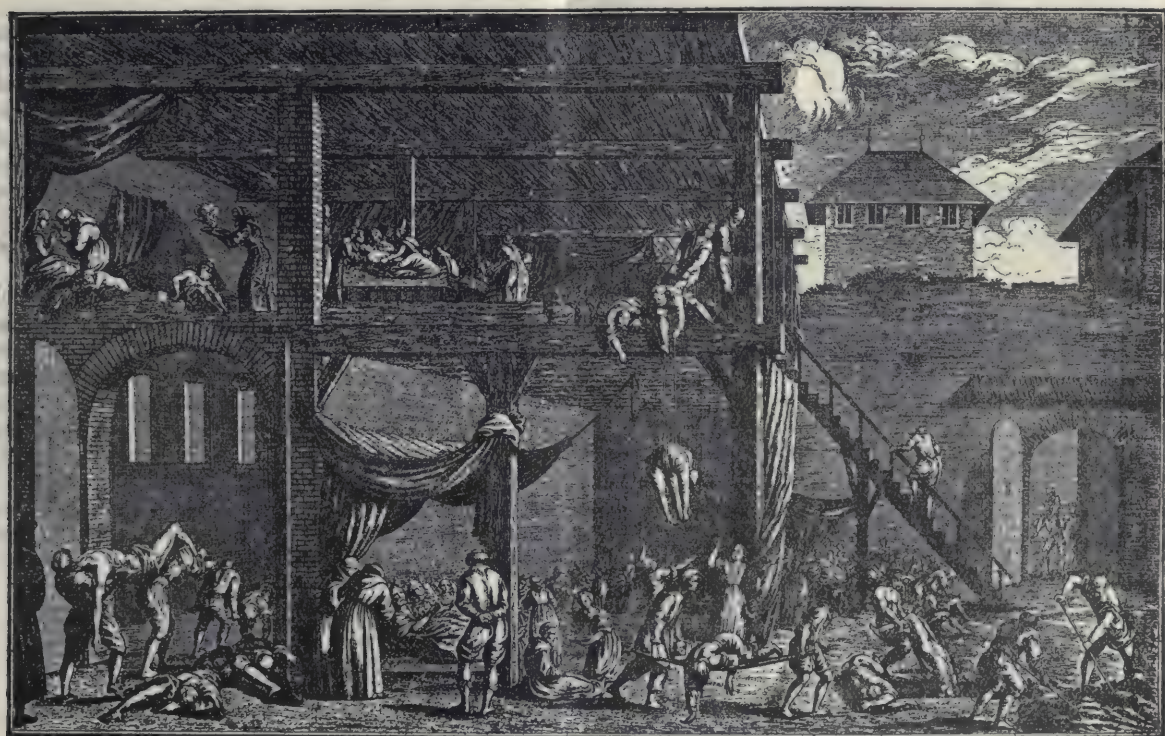


FIG. I.—THE PLAGUE HOSPITAL AT VIENNA IN 1679.
(From a Contemporary Engraving in the Historical Museum, Vienna.)

the temple, and the example set by the priests in pre-Christian times was followed and honourably imitated by the Church fathers. To a certain extent it may be said that Christianity took over from the "heathen religions" not only the principle that it is charitable, praiseworthy, and pious to care for the sick, but the whole practical system of sick nursing and hospital arrangement which was a feature of Greek and Roman priestcraft. One of the most interesting discussions is whether or not Christianity took over as well the heathen protectors and patrons of medicine and metamorphosed them into Christian saints and martyrs. There is no doubt that the calendar, which holds so many saints who are the patrons of certain nursing communities,

The public was appealed to for subscriptions on behalf, not of any special hospital, nor indeed of hospitals generally, but for contributions to the poor fund controlled by the clergy. The exception to this was the first Hospital Sunday Fund, 800 years ago, established by the bishops in South-Eastern Europe on behalf of certain lazaret houses. This fund was vigorously advertised by travelling monks, who spoke at each town and village, picturing to the public the misery of the sick and appealing for funds. It had a temporary success, but as the pestilence which primarily aroused the public to a sense of its responsibilities subsided, the interest in the matter gradually died down, and people returned to the old order of

things. One useful purpose, however, had been served by the fund, and this was that it had given the religious orders who were interested in the



FIG. II.—A HOSPITAL WARD IN THE SEVENTEENTH CENTURY.
(From an Engraving by Thiemen.)

nursing and care of the sick the means to improve and enlarge their establishments. These large nursing orders have been well to the fore in taking

advantage of improvements in hospital construction and of the advance of medicine generally. To-day anyone who visits the excellent institution of the Barmherzige Brüder in Austria will recognise the truth of this statement. The old hospitals in many instances arose out of special conditions. Such an instance was the plague epidemic of 1670 (1665 in England) which led to the foundation of one of the Vienna hospitals. The attached illustration (fig. I.) shows very well the arrangement of the interior. On the extreme left will be noticed the priest ministering to the sick woman, and the nurse bringing gruel to the old gentleman. The print shows an isolation sheet, dipped in wet vinegar and hung over the beds, while the fact that the bodies were buried within the hospital precincts will be apparent on glancing at the right. To some extent the arrangement shown must be regarded as diagrammatic.

Fig. II. and Fig. III. are of widely different dates. The first represents a ward of a German hospital (Nürnberg?) towards the close of the 17th century. The neat appearance of the ward and of the patients is striking; also the fact that there are four nurses for five patients, and that two physicians are going their rounds at the same time. On the extreme left the physician is inspecting the patients' urine—an all-important examination in those days. The second print, even more anterior in date than the first, shows a hydro-therapeutic department in a hospital during the Middle Ages. Both hot and cold and douche baths will be seen represented, while on the extreme left is seen a lady doing the drink cure. The abduction and eversion of the foot are interesting; the patient probably had a knee lesion of some sort. There are many of these old prints depicting bathing cures extant, some of them showing both sexes enjoying the same bath. In the Friedrich Museum at Berlin is a remarkably interesting picture, from the brush of Lucas Cranach, illustrating one of these baths.



FIG. III.—THE HYDROTHERAPEUTIC DEPARTMENT IN A HOSPITAL DURING THE MIDDLE AGES.

HOSPITAL SUNDAY AND THE MAN IN THE STREET.

BY A QUALIFIED COLONIAL.

HOSPITAL SUNDAY is not a modern institution. It is one as old as the word "hospital" itself. The Nicean Council, in the days when the *hospitalarium* was more directly a religious, and, proportionately, less a communal institution, impressed on the clergy the "desirability of awakening in the minds of the poor as well as the well-to-do, a proper sense of their responsibilities towards brethren afflicted and struggling under the adversities of sickness." Itinerant preachers, commissioned by no special "orphanoto-

peum," impressed this injunction upon their casual audiences, and, if we may judge from the prosperous state in which many of the hospitals of the middle ages found themselves, the activity of the clergy which resulted from the direct incentive of good Bishop Basileus (who, as we are informed by old chroniclers, built at his own expense, and at some risk of ecclesiastical censure, a pavilion for the plague patients in his diocese), was productive of the best results.

We have advanced since the days of Montpellier and Salerno. The strolling monk no longer rants in the street, calling upon his hearers to pay their tithing towards the support of the sick, and driving the argument home by relating the most gruesome of the sights he has witnessed during the latest epidemic of the "Black Death." Instead we have put "Hospital Sunday" on a firm commercial basis. It is the tendency of the times to think in shares, and it would be an anachronism were the Sunday Fund to have no solicitors, bankers, or offices. But it is questionable whether, although we have advanced so much and along such excellent lines, we have impressed the community at large with a more vivid sense of their responsibilities towards hospitals than did the travelling monk or the encyclical letters of Father Basileus.

How much does "Hospital Sunday" appeal to the man in the street? To a section of the community, that vast section that understands and acts upon the altruistic principle enshrined in the injunction "Succour the sick," that gives its penny or its pound, not on "Hospital Sunday" merely, but whenever it feels that there is need for it—to that section, indeed, the annual collection comes as a reminder not to be disregarded. To the larger section, the indifferent section, it brings no such reminder. It is passed by and overlooked. The man in the street does not think about "Hospital Sunday."

There are the exceptions, of course. There is, for instance, the aggressive, argumentative opponent of the Fund. He is a very nasty, statistical-minded individual. All his charity has run to seed long ago—it is a useless encumbrance, stifled and choked by what he calls "common sense and discretion." He it is who reads the Honourable Stephen Coleridge's yearly manifesto against the iniquities of giving alms to institutions that have, or at any period of their existence have had, within their gates physiologists who have vivisected frogs. That grey paper covered concoction, indeed, is his standby in all debate, and he swears by it as the man of Utah by his book of Mormon. He it is who sends, with unfailing regularity, annually a sub-edited Hospital Sunday Fund announcement to one of the medical papers, "for the favour of immediate insertion"—an effusion which, as it has never been published, may interest students of psychology. Here it is:

METROPOLITAN HOSPITAL SUNDAY FUND.

Patron—His Majesty the King.

President and Treasurer—The Rt. Hon. the Lord Mayor.

HOSPITAL SUNDAY.

THIS YEAR [every year] money is badly, cryingly needed. [Very pleased to hear it.]

Within a few weeks of Hospital Sunday the money raised will be divided among the Hospitals, for their maintenance only? to enable beds to be tenanted, and not for bricks and mortar? [Matron and Secretary.]

Think what sickness means to the poor whose home is often one squalid room. [From waste and drink often.]

The Hospitals ask no questions as to creed or race—they admit all. [Well to do or not. Housemaids with £25 a year, artisans with £5 a week.]

SECRETARY'S OFFICE (in connection with the Mansion House)—18 QUEEN VICTORIA STREET, E.C.
Bankers—The Bank of England.

Unfortunately this type of person "interested in hospitals" is not uncommon, and the harm he does in his immediate circle is a factor which has to be reckoned with. He proselytises, he preaches, and he practises his principle of "discretionary almsgiving" to the extent of refusing to give anything at all.

Next to him stands the indifferent man—a far larger and more important factor to be considered. The indifferent man has never troubled to think of hospitals at all. If you were to tell him that a hospital is as much a national, an Imperial institution as the Army, the Navy, or Parliament, that, from a purely national point of view it is of infinitely greater importance than the Colonial Conference, he would probably say "Walker." People have a way of expressing scepticism upon matters about which they have not troubled to think.

To the indifferent man the hospital is a place for the cure of the sick, and it is remarkable how widely different are the theories advanced by such persons as to the means by which this estimable object is accomplished. "I should like to know what they refused so-and-so admittance for; don't we pay the rates for them?" Discuss one of these periodical "hospital scandals," one of these recurring events of disagreement between the Guardians and the hospital authorities, which would be laughable were it not for the fact that every hospital "scandal" may mean a loss of thousands of pounds not only to the institution concerned, but to sister charities. Discuss one of these things with the indifferent man, and you will find that "Hospital Sunday," though it has been put on a "sound commercial basis," has not done much towards educating the citizen in his responsibilities towards hospitals.

It is difficult to see how such education can be brought nearer. Perhaps by following the American method of familiarising the community with the real difficulties of hospital work by public lectures and popular demonstrations. The statistical fiend who impinges upon hospital reports will find a great deal to carp at. The debits, in money and human lives, are too great to be wholly set off by the income and the deaths averted on the credit side. For that reason the distribution of hospital reports and the yearly accounts of work done at these various institutions will not bring home adequately to the man in the street the necessity of supporting the hospital in the district or borough wherein he lives. To a great extent these reports, from modesty or from ignorance, are silent on the national aspects of their work. They fail to point out to the reader that the hospital must be supported because it is a factor in preventing deterioration of the race, not because it is merely a caravanserai for the sick ratepayer.

That aspect of the question is one which strikes the Colonial more forcibly, perhaps, than it does the man who has been familiarised to hospitals from his childhood. Familiarity breeds indifference, which is worse than active contempt, and it is indifference, not aggressive opposition, that prevents Hospital Sunday from being regarded as the best "Empire Day" in the year.

VISITING DAY.

BY ONE WHO HAS BEEN A VISITOR.

RED carnations and lilac-pink tea-roses, tulips and white haw-blossom, and the smell of tulips and white haw-blossom everywhere. Just a shade of the pungent savour of antiseptics mingling with it. The beds made neatly, the quilts folded down in apple-pie order: the children with bows hiding the dressings: there, a couple of screens, and behind them—what? It does not matter: obviously something that we were not meant to see, else they would not have screened it. A nice ward, cheerful and comfortable, fresh and clean. The patients charming, and none, apparently, much “the worse for wear.” Such, in brief, is perhaps the *résumé* of the stranger’s impressions of hospital life gathered from the fleeting survey that visiting day renders possible. It is scarcely an accurate series of impressions, this, and it is questionable whether visiting day, as an occasion of appeal to the charity of the visitor, is a success. There are drawbacks to it, as there are disadvantages in seeing a reformatory school on prize day. The environment is not usual, not natural. It is one artificially produced for the occasion, and therefore likely to be misunderstood and misinterpreted by the chance visitor. On visiting day the ward is at its best; it vies for admiration, it struggles for recognition, and competes with its fellows in the institution in soliciting the praises of the guests. Those who wish may draw up a telling indictment against visiting day; they may call it a fraud and a mistake, this method of whitening the sepulchre to hide the bones, this dressing up of convalescents, and hiding away of patients *en extremis* behind the screen. And, as usual, where there are two sides to a question, they would be very far right in some ways and very far wrong in others.

There can be little doubt that visiting day subserves a useful purpose. It is the one day of the week on which the hospital is not a closed institution to the

general public. The policy of isolation, so far as the public is concerned—a policy of which some hospitals appear to be much fonder than others—is not altogether a wise one, but in some matters a certain degree of isolation is necessary, inevitable, and not prejudicial to the best interests of the institutions. At the same time, so far at least as our metropolitan hospitals are concerned, none of them can be said to be familiar to the public. The “hospital percentage” of our metropolitan population is a comparatively small one, especially when one bears in mind that many cases admitted to such institutions as St. Thomas’s, St. Bartholomew’s, and Guy’s are “outside” patients who may come from suburban or even rural areas. Of this small percentage only a minority actually learns something about the institution they have attended. There are many old hospital patients who cannot give a coherent account of the ward in which they have passed, it may be, some of the most anxious weeks of their life, who cannot tell the names of the staff who attended them, and who know next to nothing about the institution that sheltered and assisted them. Much more extensive and vast is the ignorance of the “non-hospital” section: the percentage that only knows the hospital from stray glimpses of the wards on visiting days—glimpses in which the tulips and roses loom large to the exclusion of the screens, just as the haw-blossom scent overpowers the lingering odour of antiseptics. It is this crass ignorance of hospital economics, administration, politics, of everything that pertains to hospital life, which is responsible for the damage that our charitable institutions have to suffer through the lack of public interest. The policy of isolation contributes in a sense towards fostering this neglect. No man is willing to give money or work—and THE HOSPITAL has on many

HOSPITALS AND THEIR SPECIAL NEEDS.

Cancer Hospital (Free), Fulham Road, S.W.—Funds needed for general expenses and the Research Department.

Central London Ophthalmic Hospital, Gray’s Inn Road, W.C.—Special efforts are being made to rebuild this hospital as recommended by King Edward’s Hospital Fund.

Charing Cross Hospital, W.C.—An appeal is being made for £10,000 towards reduction of mortgage debt. Three donations of £1,000 are promised conditionally upon this amount being obtained.

Chelsea Hospital for Women, Fulham Road, S.W.—£2,000 has to be raised annually to meet deficiency in income.

City of London Lying-in Hospital, City Road, E.C.—Greatly needs help to pay off loan from bankers of £22,000 which had to be raised to partially meet cost of rebuilding.

Evelina Hospital for Children, Southwark Bridge Road, S.E.—£8,000 has to be raised annually to help defray the cost of maintaining this hospital.

Great Northern Central Hospital, Holloway Road, N.—Financial position causing grave anxiety to committee. Deficit for 1903, £4,600. Owing to bankers £10,800.

Guy’s Hospital, London Bridge, S.E.—Funds required to provide children’s wards and badly needed increase of beds for special departments.

Hampstead General Hospital and North-West London Hospital (Amalgamated).—Debt of £6,000 and a further £5,000 is required annually to maintain the combined hospitals.

Hospital for Consumption, Brompton, S.W.—Funds greatly needed to maintain the whole of the 426 beds available at the hospital and sanatorium and convalescent home on the Chobham Ridges.

Hospital for Sick Children, Great Ormond Street, W.C.—Owing to bankers, £7,000.

Hospital for Women, Soho Square, W.—Owing to most inadequate support there is a mortgage debt of £7,000, which costs the hospital £290 a year for interest.

King’s College Hospital, Lincoln’s Inn Fields.—The building of the new hospital is rapidly progressing, and should not be hampered through lack of funds.

London Fever Hospital, Islington, N.—Financial help is very much needed, and a special appeal is being made.

occasions pointed out that both are equally wanted by, and may be equally acceptable to, our great charities—for something about which he knows next to nothing; and in every case the donor towards a charity feels more self-satisfied when he knows exactly in what manner his individual contribution has been helpful. Some of our hospitals are beginning to realise this fact. The London and the Middlesex are examples of what the profession may term “advertising hospitals”; but it is advertisement of a useful and informative kind which is as helpful to all metropolitan hospitals as it may incidentally be to these individual institutions. For by pointing out the minutiae of expenditure at one hospital, we indirectly attract attention to the needs of similar institutions. This is therefore an educative advertisement, and one that must in the long run break down the barrier of ignorance that keeps the great public at arm's length and prevents them from taking a thorough and rational interest in the inner working, the difficulties, the struggles, the triumphs and successes of our large hospitals. In this scheme of educative advertisement visiting day may be made to play a large share. Every visitor on entering the hospital might well be given a printed slip setting forth the needs of the institution, telling, in simple

and easily understood wording, of the work that it has done, of its past history, and of its struggles. The expense in initiating such a distribution of “literature” would be amply compensated by the educative value of the information gratuitously dispensed to the public. Speaking as a visitor, I have often felt the need for accurate information concerning the particular institution visited, and on more than one occasion have heard complaints made by fellow-visitors to the effect that they knew nothing about the hospital beyond the printed notices soliciting contributions.

Rubied tulips and fine roses and the scent of haw-blossom—these in themselves may create an erroneous impression in the visitor's mind. He or she does not know that these flowers are presents, and that the institution has no chance of spending a half-penny on a decorative scheme. Put it in graphic form—give the visitor a *meaning* to these yards of statistics and figures, and you will gain in added contributions and in added interest taken in the doings of your institutions. If we outsiders saw something more of real hospital life on visiting day than we are permitted to see now, we should feel more deeply for these institutions and show our feeling in practical ways by doing our best to help them.

HOSPITALS AND THEIR SPECIAL NEEDS.

London Homœopathic Hospital, Great Ormond Street, W.C.—£2,500 required to furnish extension of hospital.

London Lock Hospital, Harrow Road, W.—The claims of this hospital lack due recognition, its special need being in annual subscriptions.

London Temperance Hospital, Hampstead Road, N. The necessary expenditure exceeds the income by £2,900.

Metropolitan Hospital, Kingsland Road, N.E.—Owing to its situation in a very poor district this hospital receives most inadequate support. £14,000 annually is required.

Mount Vernon Hospital for Consumption, Office, 7 Fitzroy Square, W.—17,400 has to be raised annually from purely voluntary sources.

National Hospital for Paralysed and Epileptic, Queen Square, W.C.—Efforts are being made to raise £50,000 in order to celebrate the jubilee of the hospital by carrying out much-needed improvements.

Paddington Green Children's Hospital, W.—£1,000 donation is promised provided a further £500 is raised by July 1.

Prince of Wales's General Hospital, Tottenham, N. £7,000 required to discharge debts and £8,500 annually for upkeep.

Queen Charlotte's Lying-in Hospital, Marylebone Road, N.W.—£4,000 still required to pay for the enlargement of Nurses' Home, and £2,000 to meet deficiency in ordinary income.

Queen's Hospital for Children (late “North-Eastern” Hospital), Hackney Road.—Deficit brought forward from last year £3,430, £11,000 required for current year's maintenance.

Royal Free Hospital, Gray's Inn Road, W.C.—The necessary annual expenditure exceeds the reliable income by no less than £10,000.

Royal Hospital for Incurables, Putney Heath (Office, 4 St. Paul's Churchyard, E.C.).—Costs £35,000 a year to maintain, of which only £5,000 can be relied upon.

Royal London Ophthalmic Hospital, City Road, E.C.—Financial outlook most depressing. Adequate support cannot be obtained, and £13,000 must be raised for the year's expenses.

HAMPSTEAD GENERAL HOSPITAL, WITH WHICH IS AMALGAMATED THE NORTH-WEST LONDON HOSPITAL.

For Hampstead, Kentish Town, Gospel Oak, and all the outlying North-Western Districts.

THE HOSPITAL AT HAMPSTEAD CONTAINS 115 BEDS.

The Outpatients' Department in the Kentish Town Road gives relief in one of the most densely-populated poor districts of London, serious cases being transferred to Hampstead. The attendances average nearly 1,000 weekly.

HELP IS URGENTLY NEEDED TOWARDS PROVIDING £5,000 ADDITIONAL INCOME.

GEORGE WATTS, Secretary.

NEARLY TWO-AND-A-QUARTER MILLION SUFFERERS HELPED BY THE HOSPITALS.

A SINGLE YEAR'S ROLL-CALL OF THE SICK.

In the last year, for which complete figures are available, the immense total of *two million two hundred and forty-five thousand and fifty-one* patients were treated at the voluntary hospitals and dispensaries of London, the endowed hospitals of St. Bartholomew's, Guy's, and St. Thomas's, and the Infectious hospitals of the Metropolitan Asylums Board. Of these, 757,658 were men, 788,971 women, and 698,422 children.

These figures are lower than those given in last year's HOSPITAL SUNDAY NUMBER, but the decrease is more apparent than real for the reason that, owing to the increased care taken by the authorities of our Metropolitan hospitals, greater pains have been exercised to insure that patients shall not be counted twice at the same hospital. As a result the return of patients treated is very much lower in many instances than it has been previously. So that, although the actual figures may appear to be less, our Hospital Sunday readers must not think that any less number of patients have been under treatment; but it must be borne in mind that through the influence of the three great collecting funds—the Hospital Sunday, King Edward's, and the Hospital Saturday Funds—the statistics published by the Metropolitan hospitals are becoming year by year more accurate.

Patients Suffering from Surgical Diseases.—Of the whole number of patients received by the hospitals, *nine hundred and seventy-eight thousand and seventy-two* required surgical treatment, in addition to those treated in the special departments and hospitals for diseases of the eye, nose, throat, and ear. "Surgical" diseases include not only all accidents such as broken bones, fractured skulls, mangled limbs, and all manner of displacements and crushings of sensitive parts and organs, but also abscesses, ulcerations, cancers, and tumours of all kinds; in short all those injuries which may be produced by accident or pathological process, and which may be dealt with either by hand or instrument. It is not easy to realise that, including the special departments of our large institutions and the special hospitals, one million and a quarter people are treated annually in the London hospitals for disease requiring surgical treatment.

Patients Suffering from Medical Diseases.—*Seven hundred and sixty thousand four hundred and fifty-eight* persons received medical treatment. By medical diseases are meant those diseases which are situated either as to their source and origin or in their entirety in one or the other of the three great cavities of the body. They include rheumatic fever, pneumonia, pleurisy, bronchitis, diseases of the stomach, bowels, liver, kidney, bladder, and pancreas, every kind of heart disease, many forms of brain injury, dyspepsia, constipation, most nervous diseases, and other ailments, many of them serious and many of them dangerous to life, or at least to the useful existence of the individual. Most of these diseases are out of sight; the diagnosis of their nature and extent, and the successful treatment of them, is dependent on the doctor's scientific knowledge. Remembering this, try to realise that in the hospitals of London three-quarters of a million persons received treatment at the hands of the foremost physicians of the day, free of cost to the patients themselves.

Patients Treated at Special Hospitals for Children.—Included in the children mentioned at the commencement of this article are *one hundred and seventy-three thousand six hundred and seventy-two* children who were sent from homes where they could not be properly attended to for treatment in the special hospitals for the little ones.



878,072. Surgical Patients.



760,458. Medical Patients.



173,672. Children.

THE ROLL-CALL OF THE SICK.—continued.

Patients Suffering from Eye Affections.—One hundred and seventy-two thousand five hundred and forty-five persons were treated in the special departments of the general hospitals or by the ophthalmic hospitals of London. It is certain that very many of these cases must have entailed terrible suffering, and many doubtless would have terminated in total loss of sight but for the skilful treatment they have received at the hospitals. Who can say how many have been saved from becoming practically helpless in the world?

Diseases of Women and Motherhood.—Ninety-four thousand nine hundred and ninety-eight women were treated at the metropolitan voluntary hospitals for those diseases which are peculiar to their sex. Here it is not only our sympathy which is appealed to, but our patriotism as well. Here there is an actual demand for the payment of a debt we most justly owe. The very heart and strength of the nation lies in the home life, and the soul of the home life is the woman—the mother. The majority of us are to-day what we are because of the influences brought to bear upon us in the home.

Patients Suffering from Diseases of the Ear, Nose, and Throat.—At the special hospitals or special departments devoted to these diseases eighty-two thousand four hundred and one were treated. The affections and diseases of these organs, which are intimately connected, involve temporary and often permanent impairment of hearing, swallowing, and breathing. These functions are performed with so little effort on our part that, unless experience has taught us, it is difficult to understand what it would mean to us if we suddenly had to suffer from one or other of these affections.

Patients Suffering from Diseases of the Skin.—During the year fifty-eight thousand three hundred and twenty-nine persons were treated for skin diseases in London. It is perhaps, more difficult to bring home to people the claim which sufferers from skin diseases have upon their sympathy than it is in any of the other diseases which we are considering. There is not, here, as a rule, the pain, nor the danger to life, nor even such risk of permanent disablement as is the case with many of the others; but let us remember what the result would be were there no hospitals for the sufferers to go to.

Patients Suffering from Consumption.—Forty-five thousand six hundred and sixty-seven patients suffering from phthisis or consumption were treated at the hospitals of London during the year. The very word consumption makes us afraid. There are few of us who have not seen something of its ravages, of its cruelty. Truly may consumption be called the curse of our climate. It respects neither persons nor estate, neither rich nor poor, old or young.

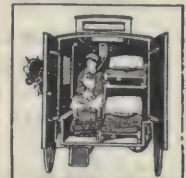
Patients Suffering from Fever.—The number of persons who were treated for the class of fevers which are usually removed to a fever hospital was thirty-seven thousand six hundred and four. This figure is, however, a misleading one, because the term fever includes much besides this class of fever. Measles, for instance, prevails in London to such an extent that more deaths occur from it than from scarlet fever. The excellent service rendered by the London Fever Hospital entitles it to the gratitude of all householders.

Patients Suffering from Paralysis and Epilepsy.—Fourteen thousand nine hundred and seventy-seven stricken with paralysis, epilepsy, and kindred ailments received treatment at the general hospitals and at hospitals devoted to these maladies. To workers busy with hand and brain these sufferers must particularly appeal. It is impossible to dissociate nervous breakdown from the toil and hurry of existence, especially in a vast centre like London. It is appalling to think that at any moment any one of us may be struck down, perhaps without the slightest warning. No disease is more sudden than paralysis, surely none more pitiful.

So this great army of sufferers, numbering two and a quarter millions, claims our sympathy and our help year by year. To the strong, to those in health who are able to provide for those dependent upon them, to those who know what ill-health means, who have suffered from disease of one kind or another, and who, either in the hospital or under the skill and care of the doctors and nurses trained in the hospitals, have been restored to health and usefulness, we confidently appeal on behalf of the London hospitals.



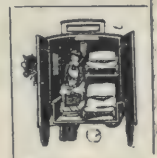
172,545. Eye.



94,998. Women.



82,401. Ear and Throat.



58,329. Skin.



45,667. Consumption.



37,604. Fever.

14,977. Para
lysis.

THE ROLL-CALL OF THE SICK.

Sufferers needing Surgical Aid . . .	978,072
Sufferers needing Medical Care . . .	760,458
Sufferers from Eye Troubles . . .	172,545
Diseases of Women . . .	94,998
Diseases of the Ear, Nose, and Throat . . .	82,401

Sufferers from Skin Diseases . . .	58,329
Consumptives . . .	45,667
Fever Patients . . .	37,604
Paralysis and Epilepsy . . .	14,977
Total . . .	2,245,051

THE INCOME OF OUR HOSPITALS.

ON Hospital Sunday two questions are prominently in the minds of us all. First, what is the total amount which has to be provided by the charitable for the support of the hospitals and institutions of a similar character in London; and secondly, what can we, individually, do to assist in the laudable object of enabling these institutions to adequately provide for the sick and suffering in our midst?

THE AMOUNT REQUIRED TO RUN OUR HOSPITALS.

As regards the first question, the following is an endeavour to supply the necessary particulars in the hope that our readers may realise what a vast and laborious task is the collection year by year of the sum required to provide for the care of the two and a quarter millions of sick who are under treatment each year in the hospitals and dispensaries of the metropolis.

Necessarily the amount received by the hospitals and dispensaries varies from year to year, though the sum necessary to keep them going does not vary to any appreciable extent, except that its tendency, owing to the constantly improving methods of treatment and the advance of civilisation, is to increase. The variation in the income arises from two principal causes—first, the giving power and will of the charitable during their lifetime; and secondly, the extent to which those who are blessed with this world's goods remember the hospitals in their wills. To what extent these factors affect the revenue of the hospitals we will endeavour to show.

The backbone of the support received by the hospitals is necessarily the gifts of the Living—those who, year in and year out, bear in mind that on them lies the pleasant duty of providing hospital treatment for their weaker brethren. The other chief sources of revenue are (a) the returns on investments made with the moneys received for that purpose from benefactors during their life or after their decease, and (b) legacies. The last two may be grouped together as the contribution of the Dead to perpetuate the work in which in their lifetime they were proud to take part.

THE TOTAL REVENUE OF THE HOSPITALS.

The first point then is, what is the total amount received by the hospitals? Taking the eight years 1900 to 1907, the voluntary hospitals and dispensaries have received from ordinary income (i.e.

subscriptions, donations of all kinds, contributions from the three great Hospital Funds, invested property, and all the usual sources from which contributions are received) and legacies a sum varying between £991,661 in 1900 and £1,276,373 in 1907, or an average yearly income during this period of £1,161,345.

The actual figures are as follows:—

1900	£991,661
1901	1,146,309
1902	1,201,385
1903	1,150,536
1904	1,181,295
1905	1,248,834
1906	1,094,365
1907	1,276,373

WHAT THE LIVING CONTRIBUTE.

Of this sum the Living have contributed the following amounts in each of the years under review:

1900	£506,051
1901	552,261
1902	592,818
1903	582,655
1904	603,425
1905	610,130
1906	635,377
1907	606,529

an average of £586,156 per annum.

Although on the whole there is a gratifying increase in the amount contributed by the Living each year, yet the sum so contributed gives food for much thought—firstly because it does not represent a full half of the amount necessary for the support of the hospitals, and, secondly, because there is evidence of a tendency to decrease, the figures of the latest year for which figures are given being lower than those of either of the two previous years.

PATIENTS' PAYMENTS.

Included in the contributions by the Living is a sum of about £80,000 per annum received from patients who wish, and are able, to pay something on account of the treatment they receive at the hospital or the dispensary. This amount is a fairly steady one, each year being:

In 1900	£77,310
„ 1901	84,824
„ 1902	82,570
„ 1903	80,830
„ 1904	81,025
„ 1905	77,095
„ 1906	82,234
„ 1907	78,858

or an average of £80,551.

HOSPITALS AND THEIR SPECIAL NEEDS.

Royal National Orthopædic Hospital, 234 Great Portland Street, W.—£25,000 required to pay off debt on new buildings.

St. George's Hospital, Hyde Park Corner, S.W.—Ordinary income falls short of necessary expenditure by upwards of £18,916.

St. John's Hospital for Diseases of the Skin, Leicester Square, W.C.—£7,000 is needed for new building in Leicester Square, and £8,000 to purchase freehold of in-patients' department in Uxbridge Road.

St. Mary's Hospital, Paddington, W.—Wards for 18 beds lie unfurnished for lack of funds, and meanwhile patients are being denied admission because existing beds are occupied.

Samaritan Free Hospital, Marylebone Road, N.W.—£3,000 required for new operating theatre and other necessary improvements.

Seamen's Hospital Society, Greenwich, S.E.—£3,000 a year required to make good deficiency in income.

University College Hospital, Gower Street, W.C.—Reliable income is short of necessary expenditure by £19,500. Twenty-four beds closed for want of funds. Financial position serious.

Westminster Hospital, S.W.—Deficiency £3,056. Debt to bankers £1,250. Annual subscriptions especially needed.

WHAT THE DEAD CONTRIBUTE.

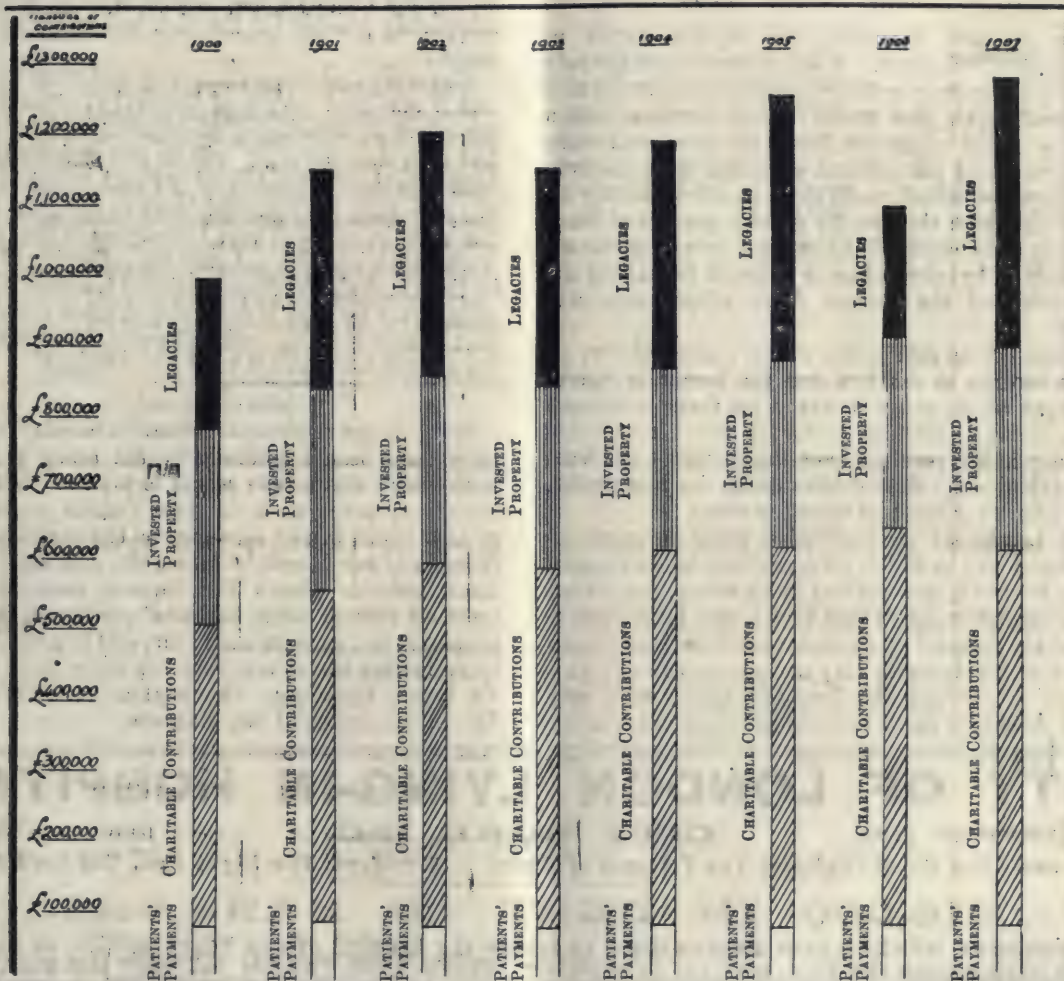
From investments the hospitals and dispensaries receive about £270,000 to £280,000 per annum, or, roughly, one-fifth of their income, as the following figures show:

1900	£277,069
1901	283,073
1902	269,476
1903	258,788
1904	258,567
1905	264,790
1906	272,704
1907	285,161

a steadily increasing amount, at any rate during the last six years.

The remaining three-tenths of the revenue comes from legacies, the amounts received being as follows:

1900	£208,541
1901	310,975
1902	339,091
1903	309,093
1904	319,303
1905	373,914
1906	186,284
1907	384,683



EIGHT YEARS' TABLE SHOWING CONTRIBUTIONS TO VOLUNTARY HOSPITALS EACH YEAR BY THE LIVING AND FROM THE DEAD, 1900 TO 1907 INCLUSIVE.

OTHER INSTITUTIONS AND THEIR SPECIAL NEEDS.

Church Army, 55 Bryanston Street, Marble Arch, W.—Donations urgently needed to help the unemployed and outcast.

Irish Distressed Ladies Fund, 411 Oxford Street, W. Funds to avoid the reduction of pensions and grants to ladies who, owing to non-receipt of rents on property, are in poverty, and are incapacitated by illness or infirmity.

London Society for Teaching the Blind, Swiss Cottage, N.W.—Additional £1,000 a year is required. New annual subscriptions greatly needed.

Mary Wardell Convalescent Home, Stanmore, Middlesex.—In pressing need of £200 to repay a loan and £200 to pay for recent renovations.

London Orphan Asylum, Watford (Office, 3 Crosby Square, E.C.).—£14,000 a year required from voluntary sources. New annual subscriptions specially needed.

Metropolitan Convalescent Institution, 32 Sackville Street, W.—About £14,000 a year is required to maintain the four Homes.

National Children's Home and Orphanage, Bonner Road, N.E.—Additional income of £5,000 required to sustain the various branches of this charity.

Royal Maternity Charity of London, 31 Finsbury Square, E.C.—£2,500 owing to bankers, and a further £2,000 needed to defray expenses of current year.

LEGACIES ARE UNCERTAIN SOURCES OF REVENUE.

Legacies are, however, as we have pointed out before, a most uncertain source of income, and we Londoners cannot look with pride on the fact that our hospitals have to depend every year for such a large proportion of the money required to keep up the work they have to do, upon a source of revenue which, as the figures given above show, may produce nearly £400,000, or, on the other hand, may not produce even half that amount.

THE REMEDY.

The remedy, however, lies in the hands of Londoners themselves. A slight increase on the part of everyone in their ordinary contributions to the sick and needy each year would in time produce such a sum as would make our hospitals more and more independent of the amount expected to be received from legacies, which could then, as extraordinary income (as which they or the greater portion of them ought to be considered), be utilised for extraordinary purposes or be invested so as to assist in making the proportion of the income from investments still larger.

Summarising the figures we have given above, we arrive broadly at the fact that the hospitals receive and require, in order to carry on their beneficent work, about £1,200,000 a year, of which rather less than one-half is received from the contributions from the Living—i.e., the inhabitants of the Metropolis, and rather over one-half from the Dead.

We Londoners are inclined to pride ourselves on the liberal way in which we contribute to the support of our hospitals and kindred institutions; but do not we rather fail to realise that such a very large proportion of the support given each year is derived from a source which, from its very nature, may in any year forsake us, leaving the hospitals either with very heavy deficits to carry forward to future years or the

alternative of trenching on the only really assured income they have?

If we Londoners can only be made to realise this it will perhaps be borne in upon us how little we really do and how necessary it is for us that we should support with steadiness and liberality our Hospital Sunday Fund.

So much for Question Number One.

WHAT CAN I DO?

As to Question Number Two. What can we, individually, do to assist in the laudable object of enabling the hospitals and dispensaries of London to adequately provide for the sick and suffering in our midst?

The reply to that question rests with each one of us, and if our brief review of hospital revenue has had the effect of showing what requires to be done, we feel sure that the reply will be one eminently satisfactory to the Hospital Sunday Fund, which is especially appealing for your assistance in the great work it has been, is, and will have to carry on in the future—work which includes not only the collecting of money for the hospitals and dispensaries of London, but work which year by year is rendering it more certain that that money is being well and properly expended for the objects for which it has been collected.

OUR DIAGRAM.

Many of our readers this Hospital Sunday will possibly have been frightened by the array of figures with which this article seems to bristle. We have, therefore, prepared a diagram (which appears on p. 15), which briefly summarises the position of the revenue of our hospitals during the past eight years. Each column shows the income received from ordinary contributions, patients' payments, invested property, and legacies each year, and in graphic form recapitulates the information we have given above. To those, therefore, who cannot be bothered by figures we commend this diagram.

CITY OF LONDON LYING-IN HOSPITAL,

INSTITUTED 1750.

CITY ROAD, E.C.

REBUILT 1906.

Patroness: Her Royal Highness The Princess of Wales. President: The Right Hon. The Lord Mayor.

£18,000 IN DEBT TO BANKERS.

EARNEST APPEAL FOR DONATIONS to relieve the Hospital of this heavy burden, so that the great work among the Poor may not be curtailed. Nearly 4,000 Patients delivered last year. New Annual Subscriptions urgently needed.

R. A. OTHWAITE, Secretary.

SEAMEN'S HOSPITAL SOCIETY.

"DREADNOUGHT."

This Old Marine Charity **Urgently Appeals for Donations and Increased Annual Subscriptions** to enable it to maintain the "Dreadnought" Hospital at Greenwich (250 beds), the Branch Hospital in the Royal Victoria and Albert Docks (50 beds), and its Dispensaries in the East India Dock Road and at Gravesend.

There is no class of the community more friendless than Sailors when ill in a strange port, and none more deserving of assistance.

The Society may take and hold real estate.

Secretary, P. J. MICHELLI, C.M.G.

BRITISH ORPHAN ASYLUM, SLOUGH.

Patron—HIS MAJESTY THE KING.

Patroness—HER MAJESTY QUEEN ALEXANDRA.

President—H.R.H. THE DUKE OF CONNAUGHT, K.G.

Established in 1827 for the MAINTENANCE and EDUCATION of FATHERLESS CHILDREN from all parts of the British Empire, of all denominations, whose parents were once in prosperous circumstances. Boys and Girls are admitted by Election, Purchase, and Presentation between the ages of 7 and 12, and are retained until 15.

The Committee **EARNESTLY APPEAL** for ANNUAL SUBSCRIPTIONS and DONATIONS, which are **URGENTLY NEEDED**, this old established National Charity being Dependent on Voluntary Aid.

Offices—27 Clement's Lane, E.C.

Annual Subscription for One Vote, 10s. 6d.; for Two Votes, £1 1s. Life Donation for One Vote, £5 5s.; for Two Votes, £10 10s. Life Presentation, £350.

Bankers—Messrs. Williams Deacon's Bank, Limited, 20 Birch Lane, E.C.

1908.

A YEAR'S WORK IN THE HOSPITALS AND MEDICAL CHARITIES OF LONDON.

ST. MARYLEBONE AND WEST CENTRAL DISTRICT.

Comprising St. Marylebone, St. John's Wood, Bloomsbury, Holborn, &c.

No. of Beds.	No. of Beds Daily Occupied.	HOSPITALS.	In-patients.	Out-patient Attendances.	Total Expenditure.	Income.			Total Income.	Legacies not included in previous column.
						Charitable.	Proprietary.	Patients' Payments.		
70	54	French	864	15,348	5,036	5,258	£ 641	£ ...	5,899	2,224
50	42	Italian	770	23,657	2,849	2,787	330	...	3,117	...
104	81	London Homœopathic	1,055	51,029	8,971	3,948	3,057	1,143	8,148	6,314
110	97	SS. John and Elizabeth	494	...	7,607	1,874	7,051	1,059	9,984	155
378	347	The Middlesex	4,037	128,615	38,078	14,139	8,386	...	22,525	8,447
100	98	Alexandra, for Children... ..	79	1,250	5,035	4,619	410	797	5,826	...
222	189	Hospital for Sick Children	3,478	105,481	22,739	9,544	5,822	106	15,472	8,710
24	17	S. Monica's, for Children	111	...	1,350	844	169	175	1,188	500
28	21	British Lying-In	535	5,184	3,588	1,268	1,488	181	2,937	...
82	75	Queen Charlotte's Lying-In	1,865	21,690	6,897	4,525	1,096	90	5,711	313
60	50	New Hospital for Women	752	33,086	6,652	4,566	1,168	1,546	7,280	11,410
56	49	Samaritan Free	773	15,047	5,246	3,583	595	...	4,178	1,362
200	177	National for the Paralysed, &c....	1,076	51,233	17,009	5,710	1,722	3,989	11,421	7,699
40	36	Hospital for Epilepsy, &c.	189	9,806	3,234	2,348	75	680	3,103	180
77	63	West End, for Epilepsy, &c.	435	20,964	7,478	6,650	110	325	7,085	...
26	19	Central London Ophthalmic	408	28,002	1,952	1,776	23	...	1,799	420
15	12	Western Ophthalmic	364	25,647	1,385	981	167	16	1,164	...
87	84	Royal National Orthopædic	450	11,367	7,021	4,744	1,490	827	7,061	890
20	16	Hospital for Gentlewomen	163	...	2,722	1,002	133	1,357	2,492	...
...	...	National Dental ... ..	...	25,342	2,261	401	...	1,549	1,950	...
14	9	London Throat	489	14,740	1,620	401	...	1,127	1,528	...
47	44	The Middlesex Cancer	136	437	4,856	3,006	2,219	...	5,225	1,817
1,810	1,580		18,523	587,925	163,586	83,974	36,152	14,967	135,093	50,447
DISPENSARIES.										
...	...	Bloomsbury Provident ... ..	...	4,617	233	73	...	151	224	...
...	...	London Medical Mission ... ..	...	26,746	1,678	1,123	311	123	1,557	204
...	...	Margaret Street, for Consumption ... ..	...	7,894	533	423	184	...	607	...
...	...	St. John's Wood Provident ... ..	...	15,302	749	312	28	356	696	100
...	...	St. Marylebone General ... ..	...	11,856	890	660	168	100	928	...
...	...	Western General ... ..	...	36,010	1,127	904	59	57	1,020	...
1,810	1,580		18,523	690,350	168,796	87,469	36,902	15,754	140,125	50,751

WESTMINSTER DISTRICT.—Comprising Westminster City and Liberties.

No. of Beds.	No. of Beds Daily Occupied.	HOSPITALS.	In-patients.	Out-patient Attendances.	Total Expenditure.	Income.			Total Income.	Legacies not included in previous column.
						£	£	£		
237	136	Charing Cross	2,178	75,477	23,317	11,275	4,554	4	15,833	13,763
224	189	King's College	2,482	46,654	21,075	13,005	3,190	6	16,201	14,779
213	183	Westminster	2,489	71,374	19,665	6,813	3,587	...	10,400	6,351
150	143	Ventnor, for Consumption	682	...	13,202	5,444	2,552	4,259	12,255	169
36	31	Grosvenor, for Women & Children	415	15,350	2,921	1,980	195	836	3,011	32
60	59	Hospital for Women	946	14,715	5,490	4,299	324	1,334	5,957	107
26	20	Gordon, for Fistula	323	5,412	2,103	713	18	1,547	2,278	...
28	24	National, for Diseases of Heart... ..	148	21,804	3,123	1,524	79	916	2,519	145
40	30	Royal Westminster Ophthalmic... ..	711	36,580	2,780	1,806	1,114	...	2,920	3,486
20	10	Royal Ear	300	10,721	1,303	922	70	770	1,762	...
...	...	Royal Dental ... ..	...	57,960	6,891	7,490	43	105	7,638	...
32	29	St. Peter's, for Stone	509	39,169	5,082	1,448	403	2,413	4,264	...
35	25	St. John's, for Skin	286	38,126	4,327	2,383	87	1,909	4,379	272
36	28	Hospital for Diseases of Throat... ..	793	48,760	4,450	1,026	59	3,847	4,932	...
85	66	National Sanatorium, Bournem'th	420	...	4,009	2,375	197	1,235	3,807	1,076
50	41	Infants Hospital, Vincent Square	431	...	2,334	2,363	50	...	2,413	...
1,270	1,014		13,113	482,102	122,072	64,866	16,522	19,181	100,569	40,180
DISPENSARIES.										
...	...	Public ... ..	...	8,107	688	319	212	...	531	...
...	...	St. George's, Hanover Square ... ..	...	2,371	471	402	...	156	558	...
...	...	Western ... ..	...	24,015	1,811	307	445	1,028	1,780	...
...	...	Westminster General ... ..	...	22,711	777	550	212	114	876	...
1,270	1,014		13,113	539,806	125,819	68,444	17,391	20,479	104,314	40,180

CITY AND EAST CENTRAL DISTRICT.

Comprising the City, St. Luke's, Shoreditch, Finsbury, and Clerkenwell.

No. of Beds.	No. of Beds Daily Occupied.	HOSPITALS.	In-patients.	Out-patient Attendances.	Total Expenditure.	Income.			Total Income.	Legacies not included in previous column.
						Charitable.	Proprietary.	Patients' Payments.		
					£	£	£	£	£	£
118	104	Metropolitan	1,733	130,748	15,075	11,895	753	...	12,648	1,300
165	146	Royal Free	2,061	101,241	17,633	7,965	1,362	...	9,327	6,605
80	60	Royal, for Diseases of the Chest ...	651	25,596	6,607	5,093	188	...	5,281	—
130	126	Queen's, for Children	1,734	74,121	11,528	9,509	311	619	10,439	70
60	34	City of London Lying-In	802	29,397	8,386	2,060	2,935	88	5,083	3,473
48	35	St. Mark's, for Fistula	484	6,033	4,468	2,572	585	319	3,476	398
138	108	Royal London Ophthalmic	2,325	120,366	12,487	8,419	1,170	...	9,589	1,461
24	20	Central London Throat and Ear ...	707	51,200	3,265	1,085	142	2,909	4,136	390
758	633		10,497	538,702	79,449	48,598	7,446	3,935	59,979	13,697
DISPENSARIES.										
...	...	Billingsgate Medical Mission ...	...	14,390	613	643	...	70	713	...
...	...	City ... ..	...	21,831	945	811	88	...	899	...
...	...	Farringdon General ... ..	...	8,083	572	297	2	185	484	...
...	...	Finsbury ... ..	...	31,129	923	608	190	247	1,045	...
...	...	Metropolitan ... ..	...	30,660	906	481	72	255	808	...
...	...	Royal General ... ..	...	11,061	825	276	391	92	759	...
758	633		10,497	655,856	84,233	51,714	8,189	4,784	64,687	13,697

ISLINGTON AND NORTH-WEST DISTRICT.

Comprising Islington, Holloway, Highbury, Hampstead, Highgate, St. Pancras, Stoke Newington, Tottenham, &c.

No. of Beds.	No. of Beds Daily Occupied.	HOSPITALS.	In-patients.	Out-patient Attendances.	Total Expenditure.	Income.			Total Income.	Legacies not included in previous column.
						Charitable.	Proprietary.	Patients' Payments.		
					£	£	£	£	£	£
167	147	Great Northern Central	2,222	78,847	19,052	8,944	2,127	948	12,019	1,136
108	59	Hampstead General Hospital ...	851	8,973	6,598	5,127	125	507	5,759	...
100	88	London Temperance	1,318	77,157	10,481	4,799	2,150	273	7,222	1,050
...	...	North-West London ... ..	...	39,580	2,034	1,007	169	114	1,290	240
125	104	Tottenham (Prince of Wales's) ...	1,420	93,482	7,979	7,318	197	...	7,515	134
279	248	University College	3,505	133,269	28,521	13,084	3,730	...	16,814	12,461
226	217	Mount Vernon for Consumption ...	1,367	12,950	16,118	16,141	865	...	17,006	450
14	14	Children's Home Hospital, Barnet ...	37	...	586	448	107	44	599	129
189	69	London Fever	712	...	11,815	6,034	1,778	2,408	10,220	665
25	18	Invalid Asylum	205	...	905	366	410	147	923	23
22	11	Bushey Heath Cottage	156	42	755	605	96	221	922	...
23	19	Enfield Cottage	266	...	927	721	53	2	776	...
29	19	Memorial Cottage, Mildmay ...	263	...	1,795	489	981	173	1,643	...
27	15	St. Saviour's Hospital	140	...	2,053	1,218	75	970	2,263	...
48	38	Friedenheim Hospital	146	...	3,804	2,721	202	169	3,092	938
25	21	Willesden Cottage	267	853	1,463	1,192	94	171	1,457	...
25	16	Wood Green Cottage	162	...	1,088	895	18	231	1,144	...
20	19	Santa Claus Home	44	...	863	799	84	57	940	100
45	43	Hospital for Incurable Children ...	16	...	1,693	848	569	652	2,069	159
18	15	Winifred House, Holloway ...	17	...	851	637	4	172	813	...
16	15	Highgate, All Saints' Home ...	141	...	373	379	2	14	395	50
1,531	1,195		13,255	445,153	119,754	73,772	13,836	7,273	94,881	17,535
DISPENSARIES.										
...	...	Camden Provident ... ..	...	5,997	270	20	45	161	226	...
...	...	Childs' Hill, Provident ... ..	...	2,615	289	35	12	242	289	...
...	...	Hampstead Provident ... ..	...	25,947	1,081	272	61	759	1,092	...
...	...	Holloway and N. Islington ...	...	2,568	806	186	43	76	305	50
...	...	Islington ... ..	...	56,091	866	353	21	618	992	...
...	...	Islington Medical Mission ...	...	6,196	490	457	21	50	528	...
...	...	Kentish Town Medical Mission ...	...	3,739	240	222	16	12	250	...
...	...	St. Pancras and Northern ...	...	3,188	613	403	118	124	645	...
...	...	Stamford Hill, &c. ... ..	...	34,601	743	672	158	...	830	...
1,531	1,195		13,255	586,095	124,652	76,392	14,331	9,315	100,088	17,585

STRATFORD AND EAST-END DISTRICT.

Comprising Bethnal Green, Tower Hamlets, West Ham, Whitechapel, Hackney, Stepney, Limehouse, Poplar, and the East.

No. of Beds.	No. of Beds Daily Occupied.	HOSPITALS.	In-patients.	Out-patient Attendances.	Total Expenditure.	Income.			Total Income.	Legacies not included in previous column.
						Charitable.	Proprietary.	Patients' Payments.		
130	117	German	1,430	99,878	12,322	£ 7,601	£ 3,339	£ 593	£ 11,533	£ 1,254
922	799	London	14,036	607,271	111,799	106,981	29,024	2,031	138,036	11,699
50	35	Mildmay Mission Hospital ...	547	37,009	4,085	2,553	1,272	144	3,969	225
103	73	Poplar	1,397	80,568	9,869	9,554	1,952	265	11,771	1,063
45	27	Walthamstow, &c.	461	12,541	1,592	1,671	172	...	1,843	200
60	44	West Ham, &c.	526	109,785	5,734	5,952	473	...	6,425	...
164	126	City of London for Dis. of the Chest	908	57,351	13,313	10,051	210	...	10,261	749
148	135	East London for Children ...	2,273	89,690	11,137	5,802	1,406	...	7,208	6,170
35	33	St. Mary's, Plaistow, for Children	610	62,120	3,478	2,938	184	212	3,334	675
33	21	East End Mothers' Home ...	498	15,570	2,154	1,088	1,051	69	2,208	...
21	17	Canning Town Cottage ...	227	14,823	1,788	782	364	297	1,443	...
14	10	Passmore Edwards Cottage, Tlb'ry	135	1,946	1,006	1,127	57	24	1,208	...
19	10	East Ham Cottage	163	16,128	907	920	80	102	1,102	...
12	6	Plaistow Maternity	110	...	464	429	50	...	479	...
1,756	1,453	DISPENSARIES.	23,321	1,204,680	179,648	157,449	39,634	3,737	200,820	22,035
...	...	All Saints, Buxton Street ...	...	3,651	171	170	...	...	170	...
...	...	Eastern ... ..	...	31,365	1,012	183	279	384	846	...
...	...	Hackney Provident ... ..	...	9,300	343	118	...	231	349	...
...	...	London ... ..	...	6,302	563	107	274	...	381	...
...	...	Mildmay Medical Mission ...	...	4,507	129	63	...	22	85	...
...	...	Queen Adelaide's ... ..	...	17,980	590	532	250	...	782	...
...	...	Tower Hamlets ... ..	...	9,113	585	292	24	129	445	100
...	...	West Ham Provident ... ..	...	789	166	29	15	47	91	...
...	...	Whitechapel Provident ...	...	21,267	748	131	...	621	752	...
1,756	1,453		23,321	1,308,954	183,955	159,074	40,476	5,171	204,721	22,135

KENSINGTON AND WEST DISTRICT.

Comprising Kensington, Paddington, Bayswater, Kilburn, Chelsea, Brompton, Fulham, Hammersmith, Chiswick, Brentford, Acton, Ealing, &c.

		HOSPITALS.				£	£	£	£	£
839	302	St. George's	4,389	113,790	40,871	7,686	14,352	...	22,038	5,000
281	261	St. Mary's	4,059	133,992	27,445	18,613	2,172	168	20,953	4,137
160	145	West London	2,273	135,959	14,352	10,237	691	...	10,928	2,097
448	407	Hospital for Consumption ...	1,367	40,059	34,014	16,898	2,504	579	19,981	20,120
40	36	Belgrave, for Children ...	621	35,654	4,138	1,988	298	...	2,286	...
50	50	Ohayne, for Sick & Incurable Childn	21	...	2,853	1,392	1,100	276	2,768	225
23	...	Kensington, General	9	24,365	1,525	1,516	40	202	1,758	200
13	9	Kensington, for Children ...	167	20,482	1,267	1,114	155	4	1,273	...
46	35	Paddington Green, for Children	738	53,270	4,372	3,320	617	336	4,273	670
154	118	Victoria, for Children	1,584	68,842	9,840	7,559	762	362	8,683	1,250
50	41	Chelsea, for Women	720	9,912	5,758	3,271	120	848	4,239	200
110	93	Cancer	823	14,500	14,703	3,832	5,234	...	9,066	24,941
138	115	Female Lock	379	...	5,131	2,470	34	2,675	5,179	535
21	18	Banstead Surgical Home ...	36	...	770	423	75	310	808	...
24	12	Acton Cottage	211	4,476	1,269	1,126	54	102	1,282	...
16	7	Epsom and Ewell Cottage ...	118	...	721	467	49	239	755	1,000
16	10	Hounslow Cottage	147	2,317	724	500	179	59	738	...
40	22	Reigate and Redhill Cottage ...	370	...	1,442	1,356	75	239	1,670	50
18	14	Wimbledon Cottage	198	60	937	592	37	134	763	...
13	7	Wimbledon, South, Cottage ...	231	118	653	558	...	106	664	...
2,000	1,702	DISPENSARIES.	18,461	657,796	172,785	84,918	28,548	6,639	120,105	60,425
...	...	Brompton Provident ... ..	...	2,826	291	104	...	189	293	...
...	...	Chelsea, &c. ... ..	...	6,526	535	269	70	72	411	7
...	...	Chelsea Provident ... ..	...	1,552	255	23	17	180	220	...
...	...	Kensal Town Provident ...	...	3,797	253	39	37	174	250	...
...	...	Kilburn, Maida Vale ... ..	...	8,132	538	334	34	...	368	500
...	...	Kilburn Provident ... ..	...	13,443	1,224	78	9	1,169	1,256	...
...	...	Notting Hill Provident ...	...	4,333	392	110	21	262	393	...
...	...	Paddington Provident ... ..	...	8,383	537	153	16	309	478	...
...	...	Royal Pimlico Provident ...	...	21,945	696	301	99	257	657	...
...	...	Westbourne Provident ...	...	6,957	433	35	48	329	412	...
2,000	1,702		18,461	735,690	177,939	86,364	28,899	9,580	124,843	60,932

NEWINGTON AND SOUTH DISTRICT.

Comprising Battersea, Wandsworth, Tooting, Balham, Streatham, Brixton, Lambeth, Newington, Southwark, Bermondsey, Camberwell, Greenwich, Deptford, Lewisham, Blackheath, Woolwich, &c.

No. of Beds.	No. of Beds Daily Occupied.	HOSPITALS.	In-patients.	Out-patient Attendances.	Total Expenditure.	Income.			Total Income.	Legacies not included in previous column.
						Charitable.	Proprietary.	Patients' Payments.		
					£	£	£	£	£	£
620	529	Guy's	8,059	446,662	68,018	17,656	39,922	5,292	62,870	8,618
18	9	Phillips' Memorial Homœopathic	121	2,403	1,131	851	202	338	1,391	...
25	23	Miller	353	74,255	4,872	3,822	670	65	4,557	335
28	16	National Anti-Vivisection, Battersea	197	23,829	2,470	2,463	812	540	3,815	5
40	20	St. John's, Lewisham	272	1,895	2,700	1,857	57	405	2,319	180
651	498	St. Thomas's	6,972	209,659	64,277	1,695	55,495	594	57,784	17,341
300	243	Seamen's	2,121	101,805	23,225	14,981	3,382	915	19,278	1,060
76	56	Evelina, for Children	889	58,302	6,803	2,457	4,298	113	6,868	8,502
57	40	Home for Sick Children	314	3,860	2,006	1,365	211	491	2,067	45
36	30	General Lying-In	837	21,470	6,014	1,924	3,835	...	5,759	...
50	25	Clapham Maternity & Dispensary	537	11,321	1,739	444	715	713	1,872	...
90	52	Royal, Waterloo	604	34,533	6,204	4,948	957	392	6,297	200
42	26	Royal Eye	580	68,890	4,337	2,319	545	447	3,311	1,060
32	17	Beckenham Cottage	243	2,208	1,192	980	3	292	1,275	100
20	12	Blackheath Cottage	160	5,498	1,104	926	38	212	1,176	150
32	21	Bromley Cottage	383	422	1,798	1,505	252	147	1,904	...
22	17	Chislehurst, &c., Cottage	264	...	1,122	733	...	348	1,081	25
22	13	Eltham Cottage	235	...	1,277	1,166	59	219	1,444	...
12	7	Sidcup Cottage	145	219	625	477	13	128	618	...
18	14	Livingstone Cottage	224	...	962	1,253	9	30	1,292	...
60	45	Bollingbroke Hospital	737	26,450	5,041	3,320	194	697	4,211	4,855
24	15	Victoria Hospital, Kingston	245	...	1,039	1,000	117	100	1,217	2,272
12	7	Woolwich Home for Mothers and Babies	152	1,652	800	620	56	180	856	...
12	11	Woolwich Cottage	167	80	1,101	277	266	113	656	414
2,299	1,746	DISPENSARIES.	24,811	1,094,913	209,857	69,039	112,108	12,771	193,918	45,162
...	...	Battersea Provident ... ..	...	200,000	4,643	214	49	4,380	4,643	...
...	...	Blackfriars, Provident ... ..	...	6,019	255	70	...	141	211	...
...	...	Brixton, &c. ... ..	...	20,268	661	524	46	109	679	...
...	...	Camberwell Provident ... ..	...	92,703	1,619	423	194	1,175	1,792	...
...	...	Clapham ... ..	...	10,852	377	218	36	105	359	...
...	...	Deptford Medical Mission ... ..	...	11,517	374	264	65	46	375	...
...	...	East Dulwich Provident ... ..	...	12,825	1,165	109	13	1,115	1,237	...
...	...	Forest Hill Provident ... ..	...	16,168	594	192	14	379	585	...
...	...	Greenwich Provident ... ..	...	23,742	584	64	16	515	595	...
...	...	Kennington &c., Provident ... ..	...	4,355	211	30	...	103	133	...
...	...	Royal South London ... ..	...	10,224	553	432	47	...	479	...
...	...	South Lambeth, &c. ... ..	...	5,403	439	229	37	105	371	...
...	...	Walworth Provident ... ..	...	7,065	318	41	28	237	306	...
...	...	Wandsworth Common ... ..	...	6,191	265	41	6	218	265	...
...	...	Woolwich, &c., Provident ... ..	...	24,579	917	81	42	767	890	...
2,299	1,746		24,811	1,546,824	222,832	71,971	112,701	22,166	206,838	45,162

THE MEDICAL CHARITIES OF LONDON.—A SUMMARY OF THE WORK DONE IN 1908.

It will be seen from the following summary that *One hundred and twenty-one thousand, nine hundred and eighty-one* patients were admitted into the Voluntary Hospitals and Medical Charities of London, during the twelve months ending 31st December 1908, and that the attendances in the Out-patient Departments and Dispensaries amounted to *Six millions, sixty-three thousand, and seventy-five*, at a cost of *£1,058,226*. The Ordinary Income only amounted to *£945,566*, leaving a deficiency of *£142,660* on the year's work. The legacies received in 1908 amounted to *£250,442*.

No. of Beds.	No. of Beds Daily Occupied.	HOSPITALS AND DISPENSARIES.	In-patients.	Out-patient Attendances.	Total Expenditure.	Income.			Total Income.	Legacies not included in previous column.
						Charitable.	Proprietary.	Patients' Payments.		
					£	£	£	£	£	£
2,299	1,746	Newington and South District ...	24,811	1,546,824	222,832	71,971	112,701	22,166	206,838	45,162
758	633	City and East Central District ...	10,497	655,856	84,233	51,714	8,189	4,784	64,687	13,697
1,270	1,014	Westminster District	13,113	539,306	125,819	66,444	17,391	20,479	104,314	40,180
1,810	1,580	St. Marylebone and West Central District	18,523	690,350	168,796	87,469	36,902	15,754	140,125	50,751
2,000	1,702	Kensington and West District ...	18,461	735,690	177,939	86,364	28,899	9,580	124,843	60,932
1,531	1,195	Islington & North-West District	13,255	586,095	124,652	76,392	14,331	9,815	100,038	17,585
1,756	1,453	Stratford and East-End District	23,321	1,308,954	183,955	159,074	40,476	5,171	204,721	22,135
11,424	9,323		121,981	6,063,075	1,088,226	599,428	258,889	87,249	945,566	250,442



ST. GEORGE'S HOSPITAL, S.W.

Patron—THE KING'S MOST EXCELLENT MAJESTY.

President—H.R.H. THE PRINCE OF WALES, K.G.

ADDITIONAL CONTRIBUTIONS EARNESTLY SOLICITED.

The ordinary expenditure for 1908 exceeded the ordinary income by **£18,916.**

In-Patients and Out-Patients treated annually about **50,000.**

HENRY WINGROVE,
Secretary to House Committee.

Treasurers { **THE EARL OF PLYMOUTH.**
A. WILLIAM WEST, Esq.

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PLEADS EARNESTLY for **DONATIONS**
in Aid of its Work on behalf of the

UNEMPLOYED, OUTCAST & HELPLESS
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FRESH AIR HOMES for Women and Children stifling in
London slums.

LABOUR HOMES throughout the land for reclamation of
criminals, tramps, loafers, and social failures of both sexes.

RESCUE WORK. HOMES FOR YOUTHS.
Fifty per cent. gain a real fresh start in life. **FARM
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Aid for the respectable unemployed and their families by
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SLUMS,** on invitation of responsible Clergy. Hundreds
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country parishes under Clergy.

**SEASIDE MISSIONS. MISSIONS TO SAILORS
AND SOLDIERS.**

SIXTY-SEVEN MISSION VANS continually itinerating.

Funds, Old Clothes, Firewood Orders (^{3s. 6d. per}
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Urgently Needed.

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ROYAL LONDON OPHTHALMIC HOSPITAL

(MOORFIELDS EYE HOSPITAL)
CITY ROAD, E.C.

FOUNDED 1804.

Every day this Hospital relieves over
100 In-Patients and 400 Out-Patients.

The Committee urgently appeal for
NEW ANNUAL SUBSCRIPTIONS.

**DONATIONS, HOWEVER SMALL, WILL BE
THANKFULLY ACKNOWLEDGED.**

ROBERT J. BLAND, SECRETARY.

LONDON ORPHAN ASYLUM, WATFORD.

Under the Patronage of Their Majesties **THE KING and THE QUEEN,**
T.R.H. THE PRINCE and PRINCESS OF WALES.

*Instituted 1813, for the Maintenance and Education of Fatherless Boys and Girls of Respectable Descent from every part of
the British Empire.*

500 Orphan Boys and Girls from all parts of the British Empire are maintained and educated, this being one of
the largest and most representative of our Orphan Institutions. **8,934** necessitous Children of respectable descent have
been benefited and fitted for situations. New Annual Subscriptions, as well as Donations, are greatly needed. Each year
brings a liability of **£14,000** required from voluntary sources.

The Managers earnestly appeal for Contributions.

Bankers: **GLYN, MILLS & Co.,** 67 Lombard Street.

OFFICE: **3 Crosby Square, E.C.**

E. H. BOUSFIELD, Treasurer.

ARTHUR P. BLATHWAYT, Chairman.

HENRY C. ARMIGER, Secretary.

METROPOLITAN HOSPITAL,

KINGSLAND ROAD, N.E.

Patron—HIS MAJESTY THE KING.

Chairman—The Right Hon. LORD HOWARD DE WALDEN.

Treasurers—The Right Hon. LORD HILLINGDON.

LEOPOLD DE ROTHSCHILD, Esq., C.V.O.

The Committee most earnestly Appeal for Immediate Help for Maintenance, and, in addition, for at least £8,000 for imperatively needed Alterations and Improvements to the Building.

In-Patients, 1908 - - - - 1,837

Out-Patients, 1908 (attendances) - - 130,748

Bankers—GLYN, MILLS and CO.; LLOYDS BANK Ltd.

J. C. BUCHANAN, Secretary.

Metropolitan Convalescent Institution.

FOUNDED 1840.

Patrons—His Most Gracious Majesty the KING and Her Majesty QUEEN ALEXANDRA.

President—The Rt. Hon. Viscount PORTMAN. Chairman of the Board of Management—M. O. FITZ-GERALD, Esq.

BRANCHES.

WALTON, near WEYBRIDGE. (236 Beds for Adults.) **BROADSTAIRS.** (118 Beds for Children, with Special Wards for Surgical Cases.) **BEXHILL-ON-SEA.** (125 Beds for Women, (with Special Wards for Surgical Cases at each.) **LITTLE COMMON, BEXHILL.** (80 Beds for Men).

No fewer than **7,526 Patients** were admitted to the Homes last year, upon discharge from Hospital or after illness in their own homes, entirely **Free of Charge**. The Board of Management **APPEAL** very earnestly for further **ANNUAL SUBSCRIPTIONS and DONATIONS**. The maintenance of the Four Homes, containing **559 Beds**, costs about **£14,000** a year, for nearly the whole of which the Institution is dependent upon voluntary contributions.

TREASURERS—VISCOUNT CLIFDEN and M. O. FITZ-GERALD, Esq.

Office:—32 Sackville Street, W.

ALEX. HAYES, Secretary.

THE MARY WARDELL CONVALESCENT HOME FOR SCARLET FEVER, Stanmore.

PATRONESSES: HER MAJESTY THE QUEEN.

H.R.H. THE DUCHESS OF ALBANY.

OPENED 1884.

OVER 4,900 PATIENTS HAVE BEEN RECEIVED.

No other Convalescent Home will admit persons recovering from Scarlet Fever. This Home, whilst benefiting the convalescent, by affording fresh air, good food, and careful supervision of health, also removes a dangerous element from society, and has therefore a special claim on public support. Subscriptions are urgently needed.

The sum of £400 has had to be expended on thoroughly doing up the Home after a lapse of TEN years, contributions to which expense can be sent to Messrs. BARCLAY and Co. (Limited), 1 Pall Mall East; and Miss MARY WARDELL, Stanmore, Middlesex, from whom further information may be obtained.

THE HOSPITAL FOR SICK CHILDREN

Great Ormond Street, W.C.

Convalescent Branch—CROMWELL HOUSE, HIGHGATE, N.

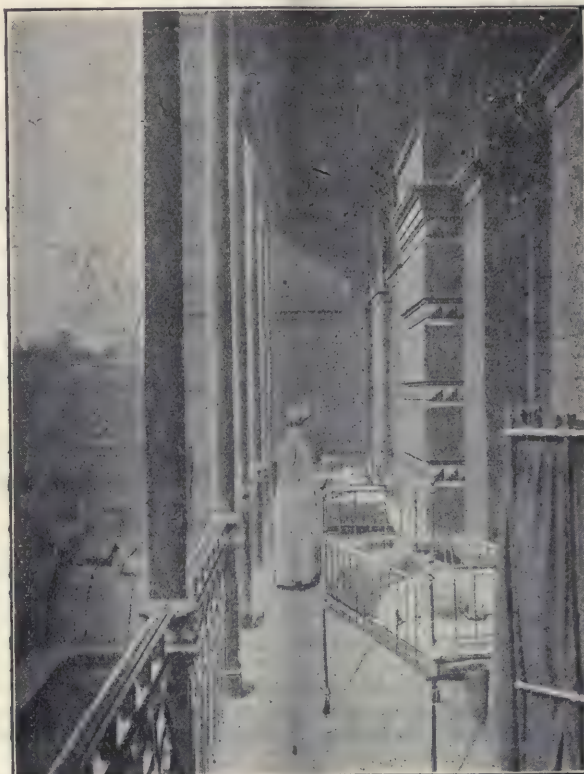
SCHOOL OF MEDICINE FOR CHILDREN'S DISEASES.

Patrons—THEIR MAJESTIES THE KING AND QUEEN.

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THEIR ROYAL HIGHNESSES THE PRINCE AND PRINCESS OF WALES.
HER ROYAL HIGHNESS THE PRINCESS ROYAL. HER ROYAL HIGHNESS THE PRINCESS CHRISTIAN.
PRESIDENT—THE DUKE OF FIFE, K.T. TREASURER—J. F. W. DEACON, Esq.
CHAIRMAN—ARTHUR LUCAS, Esq. VICE-CHAIRMAN—JOHN MURRAY, Esq.

The Hospital
receives
Patients
from
every part
of the
Kingdom.



OPEN AIR TREATMENT.

Charitable
People
in every part
of the
Kingdom
should
therefore
support the
Hospital.

NEW ANNUAL SUBSCRIPTIONS URGENTLY NEEDED.

£20

has to be raised Every Day to keep open the wards of the oldest and largest Children's Hospital in the British Empire.

STEWART JOHNSON, Secretary.

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 120, VOL. V. [No. 1152 VOL. XLVI.]

SATURDAY, JUNE 12, 1909.

THE PROGRESS OF VACCINE TREATMENT.

ALTHOUGH treatment by vaccines has been actively pursued for some time, we are still far from enjoying precise knowledge of its virtues and limitations. Like all new methods of treatment, it has suffered at the hands of enthusiastic disciples, who have somewhat scared sober minds by the largeness of the claims entered for it. Not that we need complain, since it is humanly impossible for the ardent pioneer in unbroken ground to preserve a strictly detached and judicial attitude towards his work; and it is likely that if he were capable of an absolutely cold judgment, his enterprise in the business would suffer proportionately. Nevertheless the relations of *post* and *propter* in treatment remain as equivocal as they were when Hippocrates wrote *ἡ δὲ πᾶρα σφαλερῇ, ἡ δὲ κρίσις χαλεπῇ*, and only patience and perseverance can give us the truth.

For the consummation of this end the periodical collation of unselected cases treated by the new method, with a judgment upon the results made at first hand by practitioners of repute, is of the highest service: and if the judgment be delivered by one not himself exposed to the witchery of the new craft, so much the better. Such a collation has lately been made public in a paper read before the Therapeutical and Pharmacological Section of the Royal Society of Medicine by Drs. Hale White and Eyre. The paper deals with the results of a year's use of vaccines in general medicine, and includes cases of various types. The effects of tuberculin are specifically excluded from this review on the ground that tuberculosis is, as a rule, so slow a disease that it is impossible to draw conclusions about it within the compass of a twelvemonth. But exclusive of this malady the record of cases is unselected.

The total number of patients was 29, of whom 10 were examples of genito-urinary infection. Four instances of gonorrhœal arthritis were treated by gonorrhœal vaccines with truly remarkable success, the most striking being the following: A woman aged 49 years had suffered from multiple arthritis for nine months, was believed to be the subject of osteoarthritis, and had undergone many methods of treatment in vain. Although the gonococcus could not be isolated from a vaginal discharge to which she

was subject, it was determined to administer gonococcal vaccine on the ground that the opsonic index to this organism was unduly high. Three doses of a stock gonococcal vaccine were therefore given at intervals of seven days. Under this treatment the arthritis rapidly subsided, the patient being discharged, cured, within a month. The remaining six genito-urinary cases were examples of infection of the urinary passages by the bacillus coli communis. The most persuasive may again be quoted. A woman aged 45 years had been ailing for five weeks from a multiple arthritis followed at the end of the fourth week by severe cystitis. At the time of her coming under the notice of the authors she was extremely ill, highly febrile, and if not moribund, yet apparently a hopeless case. The bacillus coli communis was isolated from the urine, and a vaccine prepared from her own strain of the organism. A dose of 5,000,000 bacilli was followed by immediate improvement in her symptoms. Two subsequent doses of 30,000,000 and 250,000,000 respectively were given at intervals of a few days and recovery was uninterrupted. Of this case the authors say that "the patient was desperately ill when seen, and had been ill so long that it appeared to us clear that the vaccine treatment saved her life, and it is of great interest to observe how quickly improvement followed the first injection." The remaining cases of infection of the urinary tract by bacillus coli communis are less dramatic, but four of the six were decidedly benefited, while two showed no response to the treatment. There were successes, though less striking, in diseases of other organs also.

It will be seen from this summary that we have good reason to be optimistic about the future of vaccine treatment. If it did no more than give us a weapon against an inveterate disease like gonorrhœal arthritis it would have justified itself, but it appears capable of giving us more. The success so far achieved will at least stimulate research touching the precise origin of a good many diseases not commonly considered bacterial. The frequency with which the urinary tract becomes infected by bacillus coli communis has only received due appreciation within recent years. It now seems certain that the colon may fall a victim to the same organism, and that even the stomach is liable to its attacks. The

feeling that we have at command a possible remedy for these out-of-the-way manifestations of bacterial activity will certainly promote the search for them. All that is required to extract the maximum of benefit from vaccines is the maintenance of a strictly scien-

tific and critical attitude in the weighing of the evidence offered from time to time. Without these precautions vaccines must inevitably share with many other more or less meritorious remedies in the past the undeserved reaction which follows overpraise.

THE UNIVERSITY OF OXFORD DIPLOMA IN OPHTHALMOLOGY.

THE University of Oxford has decided to institute a diploma in ophthalmology, and has recently announced the conditions under which this diploma will be granted. Certain of these conditions are, in our judgment, open to criticism. Antecedent to them, however, lies the question whether the diploma itself is a development likely to promote or to hinder the interests of the medical profession and of the general public. For our own part, and in answer to this question, we have no hesitation in saying that the decision of the University is much to be deplored. The advantages which may be expected to follow it are of a most restricted order, while its evil effects may be both numerous and widely spread. Into the secluded atmosphere in which academic decisions are believed to be framed the voice of the busy and practical world may hardly hope to penetrate. Nevertheless we shall state the reasons which have led us, after full consideration, to pass an adverse decision on the University policy. Our first objection to this policy is that, without any corresponding advantage to professional efficiency, it adds yet another paper qualification to a list of ornamental distinctions already far too numerous. No one can affect to believe that the institution of the new diploma and the modest curriculum which it demands will do much, if anything, to raise the general level of the study of ophthalmology in this country. The standard attained by those who restrict their practice to ophthalmic surgery is already a high one, and what is wanted is a more exact knowledge of the subject by the whole body of the profession. The ordinary curriculum now makes some demands in this direction, and these demands might well be increased. But a special diploma, so far from helping to this end, is a direct suggestion that ophthalmology is without the scope of general medicine, and that the knowledge and practice of it are legitimately restricted to a limited number of practitioners. This we regard as an unfortunate and disastrous suggestion, and one which in itself is sufficient to justify opposition to the scheme.

Further, if one University is to confer a diploma in ophthalmology, and this on terms specially favourable to its own graduates, the other Universities will be almost compelled in self-defence to take similar action. Nor is it likely that the movement

will be restricted to ophthalmology. If this justifies a special diploma a similar claim may be made for neurology, gynæcology, dermatology, otology, laryngology, rhinology, and possibly for other limited departments of medical and surgical practice. The public mind is already sufficiently confused by the existing crowd of medical titles, but if the Oxford lead is to be followed confusion will soon become even worse confounded. Again, it is almost inevitable that with the growth and multiplication of such diplomas there will arise a demand for the restriction of certain departments of practice to the holders of these distinctions. And this without question would not be to the advantage either of those engaged in general practice or of the patients placed in their charge.

Finally, and apart from the general policy of special diplomas, it may be urged that whatever may be true in other cases, ophthalmology is not a subject suitable for recognition in this fashion. In some of its aspects it is purely surgical, and ophthalmic surgery is mainly the application of general surgical principles in a special and limited field. But excepting those local conditions capable of treatment by surgical or mechanical measures, pathological disturbances in the visual apparatus have no relation to ophthalmic surgery. They depend on intra-cranial or general constitutional disease, and the investigation and treatment of them demand the methods and experience not of the surgeon, but of the physician. Ophthalmic surgery has no more to say to them than has orthopædic surgery to say to an attack of acute gout affecting a metatarso-phalangeal joint. Such disturbances belong to the general body of medicine, and they claim not the local measures of surgery, but the wider outlook and general treatment of medical practice. Yet if the Oxford precedent is to be followed only those who study ophthalmic surgery will have a claim to academic recognition as diplomates in ophthalmology. This, in our judgment, is a thoroughly unsound position and is opposed both to scientific and to practical progress. The fact of the matter is that ophthalmology is not a homogeneous or special department either of medicine on the one hand or of surgery on the other, and, therefore, it is quite unsuitable for the recognition of a special diploma, even allowing that the policy of the special diploma is in any circumstances a desirable one.

ANNOTATIONS.

Sunday Rest for Medical Men.

THE following free translation of a notice which the members of L'Union Médicale de Huy have caused to be printed and distributed to their patients is instructive, as showing the trend of the times towards trades-unionism, even in things medical. Professional co-operation in this district of France has resulted in the announcement that, "Since Sunday rest is as indispensable to the medical profession as to any other trade or profession, but since it would be difficult to organise to this end a rotation corresponding to that established by the pharmacists, the Union Médicale thinks it proper to call the attention of the public, in a practical manner, to the necessity of this rest for the faculty. To this effect the society decides, in conformity with the action which has already been taken in several other districts in this country, to put a check on the visits and consultations, often in no way urgent, which are demanded by the public of medical practitioners at all hours on Sundays. It has been decided that henceforward every visit asked for by patients on Sundays and public holidays after 9 A.M.—that is to say, after the medical practitioner's usual hour for commencing his morning round, shall be considered as a visit of urgency, and shall consequently be charged for at double the ordinary rates." The general practitioners of these islands will no doubt agree with us that this decision is neither unreasonable nor impracticable.

The Council's Report of the British Medical Association.

IN readiness for the forthcoming seventy-seventh annual meeting of the British Medical Association in July next at Belfast, the Council has now issued its Annual Report, which appeared in the supplement to the issue of the *British Medical Journal* of May 22. Several topics of much interest, relating to the Association's work during the past twelve months, are dealt with by the Council, and a good general survey of the year's progress and activity may be gained from a study of the Report; but we have only space to deal here with two or three points. The completion of the work of rebuilding the Association's central building and Journal offices, off the Strand, naturally forms the subject of general satisfaction. The Council may, indeed, congratulate itself and the Association upon the imposing structure which now provides a home, worthy in every respect of the influence and numerical strength of this immense professional corporation. Now that the absurd and highly artificial controversy, which raged last summer around the sculptural decoration of this building, has long gone the way of all such journalistic sensations, the Council may reasonably feel that these new quarters form a definite addition to the dignity, comfort, and sphere of utility of the British Medical Association. A source of regret and concern to the Council is provided by the current statistics of membership. Whatever may be the causes, the fact that the net increase of membership has fallen from 1,266 in 1906, through 131 in 1907, to 39

in 1908, must provoke anxious consideration on the part of the authorities. Analysis of membership figures shows that resignations in the past three years numbered respectively 485, 1,050 and 584, which will perhaps be regarded by the current executive with mixed feelings. New members in 1906 numbered 2,171; in 1907, 1,527; and in 1908, 1,023; and this very roughly corresponds to the decline in additions to the Medical Register during the same periods; but nevertheless there is some force in the regret which the Council expresses that, in view of all that the Association is endeavouring to accomplish on behalf of the medical profession, the increase in membership has not been more marked. The financial statement concludes thus: "The Association, like any other public body, must stand or fall by the soundness of its financial position. If demands upon the resources of the Association continue to grow in the same degree, the most important question members will have to decide is, not so much what the Association is going to do, but how it is going to do it." Here, indeed, is a matter which may well occupy the spare thoughts of those members to whom their Association is something more than a mere professional trades union, which supplies them with a weekly periodical.

Research in Nervous Disease.

WHETHER from the point of view of pure reason the non-application of hospital funds to purposes of research is justifiable or not, is not now a question of practical politics. Public opinion holds that charitable funds must not be applied to this particular method of advancing the common weal; though public opinion is ever labile, and its education is advancing, yet meanwhile hospitals must pay heed to its views on this matter. In 1904 a Nervous Diseases Research Fund was established, and was commended to the public by Mr. Chamberlain, by the President of the Royal Society, and by others. This fund was to enable some use to be made of the enormous mass of clinical material and records of the National Hospital for the Paralysed and Epileptic, Queen Square, and hitherto it has proved sufficient to meet the expenses of the researches entered upon. The time has, however, come when, according to the committee under whose supervision the money is expended, it is necessary to make a wider appeal for support. This appeal, to which we are very glad to afford publicity, is signed by names which are household words to every student of neurology; and members of the medical profession can forward the cause by assuring any who may ask their advice on this subject of the unequalled standing of these neurologists. It is not at all rare to hear students and recently qualified men excuse themselves for an admitted ignorance of nervous diseases by a remark that since all are incurable there is little object in learning to differentiate one from another. Even were it true, as it fortunately is not, that all or nearly all nervous diseases are incurable, the argument in favour of special research into such a subdivision of medicine would be strengthened rather than the reverse.

MEDICAL OPINION AND MOVEMENT.

PROFESSOR BERKLEY, of Baltimore, publishes in the *Johns Hopkins Hospital Bulletin* the results of some researches into Acute Alcoholic Poisoning and its effects upon nervous and vascular tissues. The histological studies have been chiefly upon rabbits, but some of the effects of alcohol ingestion on vascular function were observed in human beings who volunteered to be made the subjects of experiment. It is concluded that in acute alcoholic poisoning the stress of the action of the drug falls upon the walls of the blood-vessels rather than upon the nervous elements of the brain. The involvement of the latter is more gradual than that of the mesoblastic tissues, and is only traceable after the lymphatic channels have become blocked with the detritus of white corpuscles and other cellular elements. Nevertheless the action of ethyl alcohol, in more moderate but more prolonged dosage, is to deteriorate the nerve cells, as evidenced by nuclear and dendritic changes. In its action on nervous tissues alcohol resembles strongly the toxalbumins and ricin, and its effect is proportionate to the quantity administered, and to the duration of its poisonous action before death ensues.

IN the *Munchener Medicinische Wöchenschrift*, Lichtenberg and Muller deal with the question of Post-operative Thoracic Conditions. The authors have examined more than 100 successive cases, in which extensive abdominal operations have been performed, and have come to the conclusion that lung complications are extremely common after operations implicating the abdominal viscera. Slight rises of temperature of transient duration following the operation are almost invariably due to slight engorgement of the lungs. The prognosis in such cases is good; the patients recover rapidly, and unless carefully sought for, the thoracic complication is probably overlooked. They usually arise on the second, third, or fourth day after the operation, and the authors consider that this frequency has nothing whatever to do with the prevalence of general anaesthesia. Their importance lies in the fact that they may in rare cases develop into typical post-operative pneumonias. The authors consider that such pneumonias directly due to chloroform or ether narcosis are exceedingly rare. With regard to heart complications the authors conclude that these play a relatively slight rôle after abdominal operations. Where an organic cardiac lesion already exists the condition of the myocardium may be altered by the operation, and there may be changes of some importance in the vascular system as tested by taking the blood-pressure. In general the practitioner's attention must be concentrated upon the pulmonary condition, and only in rare cases will the cardiac lesions call for treatment. Out of their 100 cases, no less than 73 showed signs of consolidation, engorgement, or bronchitis, following the operation after an interval which varied from two to six days, but in no case was a death attributable to these conditions.

A RECENT number of the *Zentralblatt für Chirurgie* contains an account of some experiments performed by MacLennan with a view to the determination of the Functions of the Thymus Gland. The author took a litter of rabbits, aged six weeks, and removed the organ from each animal. He found that the operation made the animals more vigorous and increased their resistance to various infections, such as tuberculosis, favus, enteritis, etc. Moreover, the removal of the gland had a marked influence on the diminution in volume of the thyroid body. The author therefore thinks that the thymus should be examined in all persons suffering from Graves' disease with a view to its extirpation if it should be found enlarged.

DANIELOPOLU pleads for the greater employment of Strophanthine in Cardiac Lesions. In his opinion it is one of the most valuable tonics at the disposal of the practitioner. It is rapid in action, acts, according to him, exclusively on the heart, and its dosage can be graduated to a nicety in each individual case. The author employs the intravenous injection method, as his experience has led him to the conclusion that subcutaneous injections are more painful and give rise to local irritation. He uses a miligram of the drug, and repeats the dose when necessary twenty-four hours later. In cases accompanied by much oedema, he has found the most marked benefit. The amount of urine excreted is rapidly increased, the oedema is improved, and the general condition much ameliorated. Nevertheless the diuretic action is often insufficient, especially in cases of old standing heart lesions, when the kidneys are affected; in such cases the author uses theobromine, or theocine in combination with strophanthus.

JACQUET and Jourdanet, in *La Revue de Médecine*, discuss the aetiology and therapeutics of Migraine. In the authors' opinion, migraine is most certainly influenced by the condition of the stomach, and can be favourably affected by careful attention to the diet. They cite a series of cases in which treatment consisted merely in a strict dietary. Tea, coffee, alcohol, and liqueurs are forbidden, and all condiments except salt. Fish, shellfish, and all pork-butcher's meat except lean ham are forbidden. Prolonged and careful mastication of all food, even the most tender, is insisted on as essential to success, for victims of migraine often indulge to excesses in food, drink, and condiments; but, above all, they are rapid eaters. Prolonged mastication would seem to have two effects: lessening the work of the stomach by excluding indigestible material from the diet, and reducing gastric irritability to a minimum. The drawback to the treatment lies in the difficulty experienced in securing obedience from the patient. The authors, however, produced great benefit in almost every one of their series of sixteen cases so treated.

THE Subcutaneous Injection of Sea Water is being taken up by one or two enthusiasts in America as the latest cure for all and sundry diseases. The idea seems to have been started by Robert-Simon in Philadelphia last winter, and now Dr. Le Boutillier has read a paper on the subject before the Pædiatric Society of Pennsylvania. The treatment, he says, follows rationally the theory of the marine origin of life, and the fact that blood serum and sea water contain the same chemical constituents in approximately the same proportions. Now wherever life originated the date is immeasurably remote, and it is quite safe to assert that at that time the composition of the sea was very different indeed from what it is now, for the density of the sea is known to be slowly increasing. To regard the blood serum and sea water as fluids of approximately the same composition seems equally fantastic: even were it so, it would have to be established first that blood serum will cure every ailment before the argument can be extended to sea water. The cases narrated in support of Dr. Le Boutillier's treatment were adversely criticised by every subsequent speaker, and the whole society seemed unwilling to take the author seriously; but if his paper should fall into the hands of a certain type of newspaper sensationalist in this country, we may nevertheless soon expect to be asked by inquisitive members of the lay public for details of this latest cure for some pestilence or other from which they or their friends are suffering.

THE Excision of Thrombosed Veins in Puerperal Pyæmia is advocated in the *American Journal of Obstetrics* by Professor Whitridge Williams, who reports five cases with four complete successes. As a result of collating several large published series of cases of puerperal pyæmia accompanied by thrombosis, it is concluded that the mortality of this condition under expectant treatment is not less than 60 per cent. The operation of ligation of the veins by which the infection spreads from the uterus seems to have been suggested by several obstetricians, but the first who took it up and performed it were Trendelenburg and Bumm, independently, who published their results in 1902. Professor Williams has searched the literature very thoroughly to date, and has collected in all 56 cases. Of these fifteen were done by the extra-peritoneal route, but the author has several objections to urge against this, and Trendelenburg has abandoned it in favour of the trans-peritoneal. Peritonitis, which it was feared might follow the latter operation, has only been found to do so twice in 41 cases, whereas it developed once after the extra-peritoneal incision. As regards indications for the operation, the author would lay it down as necessary whenever a positive diagnosis can be made; when thrombosed vessels cannot be palpated *per vaginam* the abdomen should be opened if the patient is seriously ill and the clinical symptoms show no signs of improvement, provided that peritonitis or abscess in the broad ligament has not developed.

THE frequency of Pulmonary Tuberculosis in Children, or rather of phthisis of the adult type, is discussed by Dr. Sawyer in the *British Journal of Children's Diseases*. It appears from the returns of the medical inspectors of schools that great divergencies exist in different places in the incidence of chronic pulmonary tuberculosis amongst children, or else that the interpretation of various physical signs is not by any means uniform. Thus one (lady) inspector discovered and reported 15.5 per cent. of cases among 1,507 school children, a proportion so enormous that the accuracy of the diagnoses may not unreasonably be impeached out of hand. Other medical officers report percentages varying from 6 down to 0.1. Dr. Sawyer approaches the question from a slightly different aspect, for his figures are based not upon the examination of a large number of nominally healthy children, but on an analysis of his out-patient cases at the General and Children's Hospitals, Birmingham; and, as he points out, it is hardly likely that the percentage of phthisis present is less than that of the general non-adult population. Among 8,000 children examined, phthisis of the adult type was diagnosed in fifteen only; four of these recovered so completely that the diagnosis is presumed to be incorrect, and one other has also improved, has no tubercle bacilli in the sputum, and is now regarded as probably suffering from bronchiectasis. Of 11 others marked doubtful after the first examination nearly all improved under treatment, and were ultimately lost sight of. There were also cases of acute miliary and bronchopneumonic tuberculosis, which are not included in these figures, and there were two instances of tuberculous peritonitis in which the lungs also were demonstrably affected. But this does not affect the point that only 10 children out of 8,000 were found to be the subjects of chronic or latent phthisis of adult type, and nearly all of them were near the age limits of the hospitals, that is just under or about puberty. The same infrequency of this lesion is brought out by the tables of autopsies on children at the General Hospital. Out of 22 children dying of tuberculous disease of the lungs, only two presented lesions of adult type, the remaining 20 being all of acute and miliary form.

A SIMPLE method of operation for the cure of Prolapse of the Rectum in children has been devised by Dr. G. Ekehorn, of Sundsvall. The prolapse is reduced, and the surgeon introduces the left index finger into the rectum. A curved needle is driven into the skin along the lower part of the free border of the sacrum, and is carried through all the soft parts to the interior of the rectum, where it meets the index finger. A thick silk suture is then threaded through the point of the needle, and the needle is withdrawn. The same proceeding is carried out on the opposite side, and the other end of the same suture drawn through. The two ends of the suture are then tied across on the skin in the sacral region. The suture is left in position for a couple of weeks and then withdrawn. Dr. Ekehorn has used this method of treatment four times with

complete success. The first patient was seven years old, and the last three months. In each case the operation was effective, and there was no return of the prolapse. The operation is certainly simple, and the author claims that it is rational, as it holds the rectal wall against the sacrum, where it should naturally take its support.

MOSZKOWICZ, of Vienna, first conceived the idea of inducing hyperæmia by a constricting band round the limb as a means of testing the condition of the blood-vessels and determining the site for Amputation in cases of spontaneous Gangrene of the Foot. The method has also been adopted by Mendelsohn of Strassbourg, by Bergemann of Königsberg, and by Lejars of Paris, and the latter contributes an interesting article on the subject to *La Semaine Médicale*. The test is carried out in the following manner: The two limbs are elevated for some minutes, and an indiarubber bandage is bound round each thigh high up, sufficiently tight to produce complete hæmostasis in the limbs. The bandages are left in position for five minutes, and then withdrawn and the results observed. On the healthy side the red coloration suffuses down the limb in a few moments as far as the toes. On the gangrenous side it may also extend as far as the foot to the limits of the gangrene, but more often it ceases at a variable height in the leg, or it may not pass beyond the knee. In this way an indication is given as to the level at which amputation may with safety be carried out. Usually on the diseased side the hyperæmic coloration appears more slowly, and does not end with a clear line of demarcation, but has an indefinite limitation which is often lower on one aspect of the limb than on another. These points must all be taken into consideration in "reading" the indications for amputation and the kind of flaps best adapted to the case. Several cases are reported in which this test has been of considerable service and in which amputation has been carried out with satisfactory results at a lower level than appeared to be justified by other indications, such as the pulsation of the arteries. It might be suggested that the hyperæmic congestion induced in such cases is in itself not without danger, but, according to these authors, no untoward accident or inconvenience has followed the use of this hyperæmic test.

AT a meeting of the Berlin Society of Medicine Dr. C. Hamburger read an interesting paper on the use of fluorescein in the study of the Physiology and Pathology of the Human Eye. Ehrlich of Frankfort has shown that the sodium compound of fluorescein (uranin) has such a colouring power that it is possible to detect its presence on a dark background in solution of 0.000004 strength by reason of the green fluorescence that it gives to the solution. It has been used to show that the anterior chamber of the eye is completely separated from the posterior chamber. In spite of the extreme diffusibility of fluorescein, its injection into the posterior chamber in animals is unable to overcome the barrier separating this from the anterior chamber in a healthy

eye; whereas, if there is a lesion, the aqueous humor becomes tinted, and the rapidity and intensity of this coloration depend upon the severity of the morbid condition. Ehrlich foresaw the utility of this test in human pathology, but the supposition that uranin is highly toxic has hitherto prevented its use. Dr. Hamburger, however, is able to give the assurance that this fear of toxicity is entirely unfounded. He has injected uranin in infants and in the aged in doses of 6 to 8 grammes without any ill effects, and he advocates its use as a means of diagnosis in inflammatory conditions of the iris and ciliary body, and especially in glaucoma. In such cases the fluorescein penetrates the barrier to the anterior chamber and the eye becomes coloured, as the rest of the body after a subcutaneous injection, but when the inflammation involves the superficial tissues only (conjunctivitis or superficial traumata) there is no coloration of the eye.

THE much-vexed question of the *Ætiology* of Rickets is discussed by Dr. Aron in the *Biochemische Zeitschrift* from the point of view of insufficiency of calcium salts in the food. The researches of this author have led him to form the opinion that the supply of calcium salts plays an important rôle in the *ætiology* of this disease, and that in a large number of cases, especially in breast-fed infants, the quantity ingested is insufficient. By giving young and growing animals a food poor in lime salts Dr. Aron has been able to produce bony lesions which in all respects resembled those found in the rachitic skeleton—deformities of the bones, swellings of the lower ends of the radius and femur, proliferation of the cartilaginous and periosteal zones. Chemical analysis confirmed the morphological data: the bones of these animals contain a larger proportion of water and less dry residue, and the dry residue contains less lime salts than in normal bones. There is also a further resemblance in the lime content of the other organs. In the rachitic condition and also in these animals the author finds that the other tissues of the body contain a normal proportion of lime salts. By computing the average amount of lime salts contained in human milk and the amount usually required by a growing infant, the author estimates that there is only just sufficient, and there is no margin for cases in which the milk may be poor in lime or the infant's digestive organs unable to absorb the full amount ingested. Moreover, the author finds that insufficiency of lime salts is often accompanied by an abundant supply of milk, which tends to increase the disproportion between the growth of the child and the supply of lime salts. For a child growing rapidly an extra supply of calcium salts is especially needed, and should be added in the form of tricalcium phosphate 1 gramme per day. The fact that the administration of lime salts does not appear to affect the disease, once established, does not, in the opinion of the author, militate against this theory. The same phenomenon was observed in the case of the animals experimented upon. When the lesions were established the addition of lime salts to the food only affected the condition very slowly, often after several months.

HOSPITAL CLINICS.

A DEMONSTRATION OF MEDICAL CASES.

By SIR WILLIAM GOWERS, M.D., F.R.S., F.R.C.P.; Physician to the National Hospital for the Paralysed and Epileptic, Queen Square, London, and Consulting Physician to University College Hospital.

(A Lecture delivered at the Polyclinic, May 4, 1909.)

A DOUBTFUL CASE OF LATERAL SCLEROSIS.

GENTLEMEN, you will notice that this woman is just able to walk, but she does so with difficulty. Her age is 66, so she has reached the degenerative period of life. She suffered from nervous symptoms 13 years ago, brought on by her enforced separation from her husband after 25 years of married life. The separation brought on attacks of unconsciousness, the attacks sometimes lasting two days. She has not been able to walk properly since that date. She has not had an attack of unconsciousness for over five years.

Her heart, lungs, and kidneys are quite healthy. She is not aware of having had any convulsions; she says that in the attacks I have just mentioned she felt very queer and went off. Apparently they were not epilepsy. Her knee-jerks are said to be present during these attacks, but very feeble. There is anæsthesia of both legs, up to near the body, and of the left arm. Her left hand, as you see, is in a curious contracted condition; and the contraction of the flexors very firm. The fingers of the right hand are quite supple, and she can feel in that hand. The question is whether the condition is functional, or organic in nature.

I think there must be organic changes on the left side. Both knee-jerks are vigorous, and there is a very quick response. When I raise the right foot the left leg moves off the ground, and that is always a very important symptom, which shows organic disease. It is due to the tendency to contraction of the muscles uniting both legs to the pelvis. There is great rigidity, and neither foot can be flexed to a right angle. I should certainly say this is organic disease; that she has lateral sclerosis of both sides, involving the arm on the left side.

I remember being asked, some years ago, to see a case at another hospital about which there was great difference of opinion. The patient in this instance was a young woman, who had become paraplegic when she was walking near the hospital, and was brought in. She had had some mental trouble. Of course, mental trouble is regarded as a frequent cause of functional disease, but it does not exclude organic disease. The patient was lying in bed, and I took hold of one foot and raised it up, and the other leg moved with it; and I said at once that it was organic disease, that there was lateral sclerosis, probably secondary to an acute lesion of the dorsal cord: and so it proved on further examination. It is a symptom which is revealed at once, on the first examination of the patient.

This patient's sphincters are unaffected. You often see cases of spastic paraplegia due to lateral

sclerosis, in which both legs have become affected, and after the legs, one arm. Sometimes it involves all four limbs, but it more frequently ceases when one arm has become involved, and I think this is a case of that character.

With regard to the treatment of this patient she ought not to be forced to do anything, but ought to have upward massage to the legs and arms. No-faradism, which rather excites a greater degree of contraction; and something ought to be put inside the fingers, such as an indiarubber air-ball, to exert pressure gradually outwards. That may gradually produce more relaxation and flaccidity. She has no pain. Of course, functional disease is common, but it does not follow that all cases of disease in women are functional, and we have always to beware of coming to such a conclusion.

A DIAGNOSIS OF POST-HEMIPLEGIC CHÔREA.

Here is a man æt. 42, whose trouble started some years ago with a quarrel with his wife. Although there was subsequent reconciliation there was great emotional disturbance at the time. Six or seven months afterwards he had what he describes as a stroke, starting with numbness all up the right side. He walked for 15 minutes after the commencement of the seizure, but could not then walk any more, and was taken to Middlesex Hospital in a cab. He remained there seven weeks, and was unable to walk during his stay. He has continued to have this involuntary movement of the arm ever since.

His age was 40 when it came on. He says he has never had any venereal disease, but you hear him admit he has been lucky, which means he has been exposed to the risk of it, and therefore you cannot exclude it. It is the least offensive way of ascertaining the possibility of it. He says he has never had gonorrhœa. He married at 18 years of age.

Hemiplegia at the age of 40, if it is organic, suggests arterial disease. But he has not reached the period of arterial degeneration; therefore, if there is no cause of embolism, the arterial disease is probably syphilitic. His description is like that of the onset of organic hemiplegia, of a lesion in the posterior part of the internal capsule of the brain, near the region for the sensory symptoms, and so the onset is attended by a disturbance of sensory functions. He describes it as numbness running up the side, and down the arm. The spasm is a little like that which you see in functional cases. There is a constant spasm, not exactly a tremor, but a somewhat irregular contraction.

The symptom which would suggest simple

functional disorder is that which Dr. Harry Campbell mentioned, that he had anæsthesia in the hand some time ago, and now it is gone. The feeling, however, has just lately come back. He cannot make any definite use of the hand. There is ankle clonus, but he has had no dorsi-flexion from the plantar reflex. My impression is that it is an organic case, possibly with some functional symptoms superadded. It might be called post-hemiplegic chorea.

FUNCTIONAL SPASM.

This boy, æt. 17, has spasm of the head, as you see, which he has had nine years. He has a small head; he is very musical, and plays the piano very well. During his playing the head does not jerk very much. These shakings are apparently functional—that is to say, they do not depend upon any organic lesion. But they may persist so long that we must consider there are nutritional changes in the nerve elements. In the absence of voluntary movement the spasm is very slight.

Cases of this description are essentially different in nature from chorea, but their precise nature is not known. There should be as much rest as possible: that is the most important elementary treatment, with fresh air and massage. Hypnotism may also be tried. Of drugs, I think arsenic and hyoscine are most likely to do good.

TABES AND SYPHILIS.

This man, æt. 46, has evidence of tabes. He had syphilis 25 years ago. His symptoms have been bad two years, but he first got occasional pains about six years ago—that is to say, 19 years after the infection. His sight is not bad, but if he raises the left eyelid he sees double. He has extremely small pupils. There is no action to light, but a distinct reaction when he makes an effort at accommodation. That is the characteristic condition of pupils in locomotor ataxy—in other words, the Argyll-Robertson pupil.

As you know, those who have had tabes have had syphilis, and this pupil-symptom is a post-syphilitic symptom; it is not a tabetic symptom; you often see it without any tabes, but I think you never see it except in those who have had syphilis. So it is a symptom which is of very great practical importance. Tabes is usually preceded by syphilis, and if you find this condition of pupil you may dispense with the inquiry as to whether the patient has had syphilis. Of course, if it is absent, that is not of the same significance as to there not having been syphilis, as if it were present. This man has been married 17 years. The relation of the disease to syphilis is a matter which is simply one of inference. Tabes is not a syphilitic disease, although it is a constant consequence of syphilis; it is not a disease which can be cured by the means which are so effective in removing the true lesions of syphilis.

The best hypothesis which can reasonably be formed is that the organisms of syphilis leave a toxic agent in the body, which, without any fresh infection from increase in the organisms, develops without any fresh symptoms of true syphilis, and goes on increasing, although not inevitably, but with certainty so

far as most of the symptoms it produces are concerned. The lesions of tabes which have been produced seldom pass away, and they vary very much in their nature and character. As you know, in most cases not only is the reflex of the iris lost, but the knee-jerk is lost—there is not the least response. I saw a man a few days ago who had been said by two physicians in London, who are extremely good men, to have locomotor ataxy. He had had syphilis long before. A very well-known physician in Edinburgh said he had nothing of the kind. When his kneejerks were tried there was the usual response, there was contraction in the rectus femoris, moving the leg; but on noticing it carefully there was always a short but quite definite interval between the tap and the response. I could not tell you what the length of that interval was, but it was definite, and was present whenever an attempt was made to elicit the jerk. That is not a true jerk; it is a true reflex action from stimulation of the skin or muscle nerves, and always requires a certain time for its production. The true knee-jerk occurs instantly; it is due to a state of irritability of the muscle fibres to the local impulse given by tapping the tendon. I have no doubt that the man I spoke of has true tabes, although he had been supposed by a good authority not to have. This man has pains, and they are a very frequent symptom, but it is astonishing in what variety they occur, the amount of the pain which is felt, and the course which it takes.

THE PAINS OF TABES.

Sometimes these patients have pains for a time, and then they cease. What the precise cause of the pains is it is not easy to say with confidence. Some believe they are due to changes within the spinal cord, but I think it is more likely that they are due to the degenerative changes in the extremities of the fibres, of which we have abundant evidence. The seat of the pains varies. Sometimes they are deep; sometimes apparently in the cutaneous nerves. Pains may persist in one part for 24 hours, and then depart for weeks, or even months; and in the meantime there is perhaps another attack at another spot. This man tells us the pain is like that produced by hot wire and hot water. The temperature pain is a not very common tabetic symptom, but when it does occur it is often severe. This man's pains seem to be deep, and those are less easily relieved than are the pains which seem to be situated in the skin.

Internal agents do them good, especially aluminium, given for a considerable time, or salicylate of soda, but the immediate relief of the pain, unless it is superficial, is much less easy. Superficial pain can often be relieved by an injection of cocaine in the upper region of the part where it is felt. What is better than the injection of cocaine is to administer the cocaine by means of a voltaic battery, by saturating the positive pole with cocaine, and the negative with salt and water, putting the positive pole on the region where the pain is felt, and the negative pole—anywhere. The current goes in at the positive pole and comes out at the negative, and it tends to carry the cocaine with it into the skin. You may render a patch on the hand insensitive in ten

minutes by applying cocaine in this way. It is curious how a tabetic affection of the nervous system seems generally to be limited to some nerves, affecting other nerves very little.

This man's deeper nerves seem to suffer much from the irritation, caused by the very slow minute changes going on in them in consequence of the degeneration, and yet the nerves of the muscles themselves can be very little affected, or his gait would be much more ataxic. His sexual power is not lost, but is much diminished. He has no difficulty in passing his water, and his bowels are regular. This man illustrates the general affection of tabes. He has had much iodide, apparently without benefit. He has no cough or gastric crises. Touch is generally not impaired, and pain is much impaired, and to test touch, nothing is better than the feather of a quill pen, the other end being cut into two separate points, to test sensibility to pain, they seldom draw blood in the examination as does a pin.

A TYPICAL CASE OF PSEUDO-HYPERTROPHIC PARALYSIS.

Here is a little boy whom I happened to see at the hospital yesterday. The case is an extremely typical example of pseudo-hypertrophic paralysis. He seems to be the only case of the kind in his family. He is not a very bright boy; in this he is an exception, for in most cases of pseudo-hypertrophic paralysis the mental development is good. These patients are not able to take the ordinary amount of physical exertion, and so their minds often get a little over-cultivated. There is nothing else special about his aspect.

I imagine that you all know the general characters of pseudo-hypertrophic paralysis, and most of you must have seen cases. You know the common features of the disease, and this boy shows some which are very interesting. He has conspicuous enlargement of the calves, and some enlargement of the thighs, but not just above the knees; so the calves are an inch larger in circumference than the minimum of the thighs. When he sits his back is straight; the common curvature comes on when he stands. The disease depends on deficient growth of muscular fibres and over growth of the interstitial tissue and fat. As I pointed out many years ago, the *infra-spinatus* in these cases is generally enlarged, just as the calf muscles are. You see here the prominence formed by the *infra-spinatus*, but the lower part of the *pectoralis* is small, and the *latissimus dorsi* is also small; they are indeed

absent, and it seems probable they were congenitally absent. The *serratus magnus* is also much affected. That is why the apex of the scapula projects forwards as he holds his arm out. He also shows very typically the characteristic way of getting up from the floor, putting his hands on the lower part of the femora to raise himself. Ordinarily the knee is extended by the extensors in the thigh, but the weight to be raised is at the upper extremity of the femur. And the muscle which extends the knee acts from, on the average, the middle of the femur, so that the power is between the fulcrum at the femur and the weight at the top of the femur. That is the position in which the power acts to least advantage. Whereas the boy, by putting his hand on the lower part of the femur, transfers for the moment much of the weight of the trunk to the lower part of the femur, close to the knee. It is curious that that is so seldom seen in any other affection, probably because this affection develops during the period of growth, and in the body of the young child this contrivance is readily adopted. Its importance as a diagnostic sign is great.

TREMOR IN PARALYSIS AGITANS.

This man's age is 46, and he has paralysis agitans. You will have noticed with what short steps he came in, and that his right arm shakes. I place a piece of paper on the floor and ask him to step on it as he walks, and you see that by such a simple device he feels impelled to take longer steps, and his gait is really quite altered by it. His arm began to shake when he was 38, which is a very early age for paralysis agitans to commence. The condition begins most frequently between the 50th and 65th years. In his hands there is a little tendency to the contracture of the *interossei*, and there is spontaneous tremor. The left arm does not shake so much. The tremor is a little increased by effort. But, for diagnostic purposes, a more significant fact is the expressionless aspect of the face, and the tendency to fixation of the limbs. The knee-jerk is usually normal, not increased.

The diagnosis between tremor due to other causes and paralysis agitans is often very difficult; but when you find in addition general fixation of the muscles, you can have no doubt about the diagnosis. He has a tendency to dislike heat, and he likes as few bedclothes as possible—a common tendency in paralysis agitans. Some dislike cold even more than they object to heat. He has some little tremor of the tongue, but not much.

SPECIAL ARTICLE.

OPHTHALMIC CONDITIONS IN THE GOVERNMENT SCHOOLS IN EGYPT.

A RECENTLY published monograph endeavours to show briefly the methods adopted by the Government to stamp out, or at all events relieve, the ophthalmic distress under which the inhabitants live. Egypt is always looked upon as the home of trachoma; hence by far the greater part of the work

undertaken and the treatment adopted is in an effort to combat this disease, and to relieve the sufferers already afflicted by it. The Director-General of the Department of Public Health was asked how this could be best carried out, and he recommended the establishment of a travelling ophthalmic hospital.

The duties of this hospital were to treat cases from the neighbourhood surrounding the temporary resting-place of the camp-hospital, and to train the Egyptian doctors attached to the hospital in modern ophthalmic surgery.

The treatment of trachoma on a moderately large scale is an exceedingly difficult and lengthy business, unless the patients can be collected together, placed under the most suitable hygienic conditions having regard to the extremely contagious nature of the disease, and treated every day by skilled hands; but when an endeavour is made to treat a whole nation, especially one not noted for habits of cleanliness (largely due to the insufficient water supplies), one can only be surprised that any advance at all has been made. It was very early found that to treat the aged for a short time, the inhabitants of some town and its outlying neighbourhood for a few months during the year, and to repeat this year after year, though necessitating the greatest amount of hard work, was barely touching the evil, so attempts have been made to treat the young and growing generation by means of school inspections and treatment of any afflicted scholars. The young subjects react more readily to treatment, and do not present the deformities due to long continuance of the disease which make many cases almost untreatable. Together with actual treatment as much as possible is done to educate the school children in habits of cleanliness, and in taking precautions not to become infected themselves or infect anyone else.

Part I. of the report contains a *résumé* of the work done in the year by the two travelling hospitals now established. The number of new patients treated has been 7,446; the average number of attendances of patients regularly treated, 19; 3,173 patients were seen who were incurable, and were sent away after the first examination. This shows the enormous difficulties met with in treating a whole nation, since large numbers of those "incurable" remain very active carriers of infection. Over 2,000 persons were seen who had been operated upon for trichiasis by charlatans, and in most cases were worse than before, further increasing the difficulties and rendering it more than ever necessary to train the Egyptian doctor in ophthalmic practice.

Part II. deals with the means of education in Egypt; the cause of the prevalence of eye disease in Egypt and its nature, including some observations on the stages of trachoma; and concludes with "Facilities for Ophthalmic Treatment in Egypt," the gist of the latter being a somewhat detailed account of the extreme difficulties met with and to be overcome before much progress towards the relief of the large numbers afflicted can be effected. Under cause and prevalence, a remark is made "that it is comparatively rare to find anyone above the age of twenty years who exhibits no trace either of active or passive trachoma." The writer divides the disease in its earliest stages; the second the very active, well-developed granulation stage; the third the stage of cicatrization; and the fourth the condition in which there is a smooth conjunctiva seamed by white lines of connective tissue, the stage of cured trachoma. By "cured" trachoma is evidently

meant the condition when the activity of the disease has come to an end; but slow contraction of conjunctiva causing deformities of the lids is still going on and continues to do so for many years, though the disease is in all probability non-infective.

Part III. deals with statistics relative to numbers of cases seen in the schools and at different school years. In this is mentioned, "Out of 485 pupils in the school at the beginning of the school year, only 21 were found to be absolutely healthy (as regards their eyes), 464, or 95.67 per cent., being infected with trachoma." Also 15 of those at first classed as healthy developed trachoma during the school year, not necessarily, of course, infected at school or within school hours, but much more likely to have acquired it at home. It was also found that there was a greater percentage of trachoma cases amongst those who had bad vision than amongst those who had normal or good vision. Amongst healthy patients in England various forms of conjunctivitis are found more frequently amongst those with some defect in vision than amongst the absolutely normal sighted.

Part IV. deals with the means adopted at one of the largest Government schools (Tantah) with a view to the improvement of the ophthalmic conditions. These resolve themselves into detailed examination of the eyes and sight of every pupil at the beginning and end of the school year, for the compilation of statistics, etc. Prophylactic treatment for all pupils with severe trachoma, apparently within school hours. Still further treatment of those afflicted, carried out at request of the pupil and out of school hours. The atropinisation and refraction of all scholars with defective vision. Information given to guardians, parents, etc., when those scholars in their charge have such a diseased condition of the eyes that operative treatment is considered necessary. Power given to the head-master to send any pupil who develops a discharge from his eyes to the ophthalmic surgeon.

Part V. deals with the results of treatment. The complete examinations of all pupils were made, one at the beginning, the other at the end of the year, and the results tabulated. Although prophylactic treatment (which consisted in the instillation of antiseptic drops into the eyes of all suffering from severe trachoma) was carried out daily for the 211 pupils with severe trachoma, the writer considers this has but little effect on the disease, and includes them among the statistics as being untreated, and states that of the treated cases 87.2 per cent. showed improvement at the end of the school year, while of the untreated cases only 5.9 per cent. showed improvement. In the ordering of glasses for those requiring them extreme difficulty was found in many cases to get frames to fit, owing to the abnormal length of the eyelashes, often reaching eleven millimetres, which necessitates the adjustment of the lenses at a considerable distance from the eyes.

The whole report, which has the advantage of being written by "the man on the spot," shows that much has been done both in the way of treatment and in organisation towards the effective treatment of a nation which for centuries has been afflicted by one of the most destructive forms of eye disease, and which it will take generations to cure.

MEDICINE.

THE PRINCIPLES OF MANAGEMENT OF VISCEROPTOSIS.

THE ætiology of visceroptosis is embraced under three main headings, namely: (1) congenital defects; (2) pregnancy; and (3) prolonged impairment of general nutrition. Of these, the third is by far the most important. Under congenital defects should be grouped mainly those cases in which the symptoms arise during early life, and in which no other cause can be determined. Repeated pregnancies at short intervals lead to relaxation both of the abdominal walls and of the pelvic floor.

Malnutrition, or rather impairment of general nutrition, may result from any unhygienic modes of life, whether in the direction of excess of eating with deficiency in exercise amongst the well-to-do, or in the direction of close confinement, prolonged labour in factories, deficient food, and so forth amongst the working classes. Corsets, falls, and direct blows in the regions of the various abdominal organs probably have no effect on their position unless one of the causes mentioned above has first existed.

Should any chronic toxæmia have become established a vicious circle at once becomes active. The nervous disturbances affect digestion deleteriously, whilst stagnation in the digestive tract increases the poisoning of the circulation and so hastens degeneration of the nervous system and muscles. Each condition thus reacts upon the other to exaggerate it.

For purposes of management Dr. Halsey groups the cases according to symptoms as follows: (1) Those in whom the nervous symptoms are the most prominent; (2) those who complain most of digestive disturbances; (3) those in whom organic displacements account for distress.

He groups the treatment under six main headings, namely those of hygiene, rest, passive and active exercise, mechanical support, drugs, and operation.

Hygiene includes regular hours for sleep, bathing, eating; and life in the open air. These are all essential in every case of visceroptosis. The clothing about the body should be worn loose. The custom of wearing about the waist tightly constricting bands, belts, or strings from which the skirts or trousers are supported must be discontinued. All weight of the clothing should come upon the shoulders; otherwise the good arising from support of the lower segment of the abdomen will be counteracted by the downward pull of the constricted upper segment.

Rest may require prolonged application in isolation, as in the Weir-Mitchell treatment of neurasthenia. The diet should consist of all classes of food taken at frequent intervals in small amounts. Rapid improvement of nutrition follows the use of such foods properly prepared so as to be easily absorbed from the weakened digestive apparatus. Fluid should be used in large amounts, but it should be administered at such times as will ensure its not interfering with food digestion. Rectal enemata of normal saline solution may sometimes be necessary either to cleanse the bowel or to increase fluid absorption.

Exercise should at first comprise passive massage and resistant movements. Later the different muscles may be exercised actively. Particular attention should be directed to increased functional use of the abdominal muscles; movements in imitation of rowing, and of mowing with a scythe, are useful here. Under no circumstances should they be carried to the point of fatigue, though a brief rest after each period of exercise will accelerate the gain. As soon as may be the exercises should be carried on in the open air, and the more enjoyable they can be made the better.

Mechanical support is directed to the segment of the abdomen below the umbilicus. Although radiographs show no replacement of the hollow viscera, the effectual support of the lower segment does relieve the symptoms and aid materially in improving the nutrition. Improvement of nutrition may accomplish only the relief of the symptoms, yet in some cases it effects complete fixation, after which the mechanical support can be dispensed with.

It is absolutely essential that the mechanical method selected, whatever else it does, should hold back the lower abdominal segment; otherwise it will afford no benefit. It may be noted that support applied in this way relieves symptoms even when there is no prominence of the lower segment, and without raising the lower border of the stomach. The degree of pressure exerted probably diminishes chronic congestion and also diminishes the strain on ligaments and adhesions. Mechanical support, except in cases of separation or excessive relaxation of the abdominal muscles, should be employed only as a temporary expedient whilst the other means of improvement are gradually taking effect.

Such drugs should be employed as will improve the tone and meet the symptoms at the moment. In nervous cases it may be necessary to give sedatives or hypnotics for a while, but they should be used only as a temporary expedient, and never for prolonged periods. Glycero-phosphates, iron, arsenic, ergot, cocoa, strychnine may all be employed at different times in varying doses according to the case. A very useful all-round prescription is: Syr. Hypophosph. Co. (B.P.C.), 5j. t.d.s.p.c. ex aquâ 3j.; Cathartics should rarely be resorted to—they are used far too often.

When there are definite symptoms from displacement of an organ, and all the above lines of treatment have failed, then operation must be resorted to. The pelvic organs should be replaced, and repaired if there are lacerations or prolapse. The kidney may be fixed if it is clear that there is an intermittent blocking of the outlet—though it is important to avoid even the suggestion of an operation when the kidney is merely felt to be movable, without there being definite local symptoms. The liver or the spleen may occasionally need suturing in place.

ASCITES.—I

ASCITES is the term which is used to denote an accumulation of serous fluid in the general peritoneal cavity. The amount of fluid may vary from a few ounces to several gallons.

There cannot be any very great amount of ascitic fluid present if the abdominal wall is flat, still less if it is retracted. In cases of ascites there is nearly always abdominal distension, the latter being uniform and varying with the amount of fluid which is present. If the quantity is large and it has accumulated rapidly the abdomen presents a rounded, globular appearance, and the umbilicus is no longer a depression. If an acute case, the umbilical region may be the most prominent; if, however, a large quantity of fluid has taken a considerable time to accumulate, bulging of the flanks is a marked feature of the general distension, so that the transverse diameter appears to be greater than the antero-posterior. If, again, the quantity of fluid is not great, only a slight bulging of the flanks may be noticed.

It must, of course, be remembered, that the appearance of the abdomen depends a good deal on the position of the patient during the examination. The above description applies to a patient who is lying perfectly flat upon his back, for if he be inclined to one side more than to the other the most dependent part becomes the most prominent, as the fluid has gravitated to that side of the abdomen. If the patient is standing or sitting upright the hypogastric and iliac regions will bulge. In cases of some standing the skin of the abdominal wall becomes tense and shiny. With large effusions *lineæ albicantes* will develop in the lower half of the abdominal wall.

The umbilicus retains its position in the median line, and it remains nearer to the symphysis pubis than to the ensiform cartilage. In tuberculous peritonitis the skin in its immediate neighbourhood sometimes becomes reddened and cedematous, and there may be a purulent or even faecal discharge from it. In cirrhosis of the liver it is often stated in text-books that the veins around the umbilicus may be dilated and tortuous, forming the so-called "*caput medusæ*," but in practice this occurrence is one of the very greatest rarity.

The superficial veins all over the abdomen and lower part of the chest may be dilated; if the blood within them is flowing in an upward direction it indicates obstruction to the inferior vena cava either by the weight of the ascitic fluid itself or else by the cause of the ascites—new growth, for instance—with the result that blood from the abdomen is compelled to seek the right auricle by the azygos veins or by the superior vena cava. The thighs, legs, and loins may be cedematous. The epigastric angle will very likely be widened out, and in severe cases the lower ribs may be everted.

Abdominal movements are restricted or even entirely suppressed, and respiration becomes thoracic in character. The cardiac impulse may be displaced upwards or outwards, or both.

The abdominal wall is not necessarily tense. If the fluid is small in amount, or even if, though abundant, it has been a long time in accumulating, or has begun to decrease after being still more abundant,

the parietes may be quite flaccid. If, on the other hand, the quantity of fluid is very large, or if it has collected rapidly, the abdominal wall may be so tense as to preclude palpation of the organs behind.

A fluid thrill is nearly always to be obtained by placing the palm of one hand in contact with the flank on one side and then flicking the other flank with the fingers of the other hand; a distinct wave or sense of vibration can be felt. In order to eliminate the thrill which is apt to be transmitted along the abdominal wall the patient or an assistant should place the side of his hand on the edge of a thin book or some similar object along the front of the abdomen vertically in the middle line. If this precaution is taken and a thrill is still obtained, fluid is certainly present, although it is not necessarily ascitic.

If the liver or spleen is enlarged, a layer of fluid is generally present between the anterior surface of the organ and the abdominal wall. If under these circumstances the tips of the fingers are placed upon the abdomen in the right or left hypochondriac region as the case may be, and are suddenly depressed, the fluid is displaced and the surface of the underlying enlarged organ is felt. This form of examination is called the "method of displacement" or "dipping," and it is one of the pathognomonic signs of the presence of free fluid in the peritoneal cavity.

The direction of the blood current in any dilated veins, the position of the cardiac impulse, the diminished respiration movements, and the condition of the umbilicus, mentioned above under the heading of inspection, can be checked by palpation. In malignant disease that has extended to the peritoneum the umbilicus may be felt fixed and thickened; infiltration of the remains of the urachus below the umbilicus may also be sometimes palpated.

The abdomen should always be examined with great care after the performance of paracentesis abdominis, for tumours and enlargements of organs may then be discovered which were previously hidden or obscured by the tenseness of the abdominal wall.

When the patient lies flat on his back the fluid gravitates to the posterior parts and sides of the peritoneal cavity, and the air-containing viscera float upwards and forwards, so that the percussion note in front is resonant, whereas in the flanks it is dull. As the fluid increases in quantity the line of dullness creeps forwards until it reaches from side to side across the middle line just above the pubes first, and thence steadily upwards; the line of junction between resonance above and dullness below is a curve whose convexity is downward. In extreme cases the abdomen may be dull all over, a condition which is not uncommon in children suffering from ascites, and which is also present in some cases of tuberculous peritonitis when the mesentery is thickened and shortened to such a degree that the intestines, being thus tied to the posterior abdominal wall, are unable to float forward. In a few such cases the bowels lie in the flanks and the fluid in front of them, giving rise to the physical signs which are usually regarded as typical of pregnancy or ovarian cyst—dullness in front and resonance in either flank.

(To be continued.)

SURGERY.

ENLARGEMENT OF THE PROSTATE.—IV.

THE ultimate success of the operation of prostatectomy depends largely upon the after treatment of the case, or, in other words, upon the constant care which must be exercised in keeping the dressings fresh and in seeing that the kidneys are encouraged to do their work properly. There is no doubt that the operation is apt to throw a sudden strain on the kidneys, and it is not infrequently happens that, although they were excreting a sufficient amount of urea previously, they do not adequately perform their function afterwards. To avert this it is well to apply a linseed poultice to each loin immediately after the operation, and to keep one on for, say, the first twenty-four hours. This treatment is simple but effective. The patient should be kept flat on his back until he comes round from the anæsthetic; but as soon as he has recovered he should be propped up a little, because, in view of his advanced age, hypostatic pneumonia is quite likely to ensue if this precaution is not taken.

The main trouble which has to be combated is the constant wetting of the dressings with the urine, which makes its way out of the wound. To overcome this several ingenious mechanical appliances have been invented. The principle, which is similar in all of them, is much the same as that of a colotomy apparatus, a celluloid cup being fixed over the wound to collect the urine, which is led away through small indiarubber tubes which are attached to openings in its lower part. The disadvantage of these appliances is that it is very difficult to get them to work properly, and if there is any leakage they are worse than useless.

The writer's experience is that ordinary dressings are quite satisfactory if a thick pad of wood-wool is applied outside the gauze. It will be found that it is unnecessary to change this more than three or four times in the twenty-four hours. The skin round the wound should be covered for a considerable distance with a thickish layer of ointment to prevent excoriation owing to its being constantly wet with urine. The best ointment for this purpose is a mixture of equal parts of lanoline and unguentum zinci. But the secret of success is to apply enough of it, and to spread it over a sufficiently wide area.

The wound should be dressed by the surgeon at least once daily, and the empyema tube gradually shortened. On the third day it should be replaced by one of a smaller size, and on the fourth or fifth day this may be dispensed with altogether. By this time a track will have been made down to the bladder, which remains open of its own accord.

Some surgeons leave a catheter in the urethra at the end of the operation, in order that they may irrigate the bladder through it during the subsequent dressings. Opinions differ upon the advisability of doing this. The writer is opposed to it as a routine practice, and for the following reasons: There does not appear to be any advantage in irrigating a bladder per urethram when it is already well drained by a suprapubic opening, and to do so causes the patient some little discomfort daily. Besides, after a few days a

mucopurulent discharge collects between the catheter and the urethral wall, and it stands to reason that its presence must militate against the healing of the cavity from which the prostate has been removed.

On the other hand, experience shows that the less the patient is disturbed by such manipulations, the more complete and rapid is his recovery. In fact, it is really not necessary to pass a urethral instrument at all during the whole period of convalescence. In a successful case the suprapubic wound begins to contract down as soon as the tube is removed, until at about the end of a fortnight it is almost completely closed. As soon as the resistance to the passage of urine through the suprapubic sinus is greater than it is per urethram the patient will pass water naturally. This usually occurs between the fourteenth and eighteenth days after the operation.

Certain complications must be mentioned which interfere with a successful result, and if urine is not passed naturally in three weeks' time it is probable that one of them is responsible. Thus phosphatic calculi have been known to form in the cavity from which the prostate has been removed. Their nucleus is formed by small tags of blood-clot which are attached to the wall of the cavity, and calculi are formed by the successive deposits upon them of layers of the phosphate which separates out from the urine.

It is well known that phosphates quickly settle on a foreign body in the bladder, and in this case the clotted blood acts in this capacity. The passage of a catheter will disclose the state of affairs, because the calculi will be felt as the point of the catheter passes into the bladder. If calculi are present there is no alternative but to open up the suprapubic wound and remove them. In this case the bladder should be subsequently irrigated daily in order to prevent a reaccumulation. Sometimes the natural flow of urine is prevented by a small tag which has been left on the wall of the prostatic cavity, and this may fall down and occlude the orifice of the urethra, just as a "middle-lobe enlargement" does.

It is always exceedingly hard to diagnose this condition without having recourse to cystoscopy. Cases have also been recorded in which obstruction to the outflow of urine occurs some time after the operation owing to the contraction of the prostatic cavity, so that a fibrous stricture results. The writer has not seen such a case, and in view of the width of the cavity one would think that such a complication would be very rare.

The best treatment for this state of affairs consists in dilatation, as in the case of an ordinary stricture. Occasionally after the operation the patient loses urinary control altogether. Whether this is due to the disturbance with the normal anatomy of the parts at the neck of the bladder or to damage to the compressor urethræ at the operation is uncertain. But, whatever the cause, the prognosis with regard to recovery of control is exceedingly bad.

DISEASES OF CHILDREN.

NASAL DISCHARGES.—II.

NASAL lotions or Collunaria are applied by spray, syringe, irrigation, medicine dropper, brush, probe and cotton, or absorbent wool. Neither plain water nor strong antiseptics or astringents should be used, except silver nitrate as previously mentioned. Lotions should be ordered of a strength treble that at which they are to be used, so that they can be diluted with two parts of hot water. If ordered at the required strength, then the bottle containing the lotion should be placed in water until the temperature reaches 90° F. Under one year of age, or even up to the third year, lotions should be applied by dropping them into the nostrils with the child lying on the back. For older children, spraying, syringing, and douching or irrigation may be adopted. Forceful methods are liable to cause infection of the Eustachian tubes and middle ears.

Mode of Syringing.—Use a glass syringe, holding about one-half ounce, carefully disinfected. Cover the nozzle with a piece of soft rubber tubing, for insertion into the nostril to prevent injury. Place the child on its back with the head turned to one side. Stand behind the head and syringe through the upper nostril, allowing the fluid to flow out through the lower nostril or the mouth, which should be open. The child may be held in the sitting posture with the head well forward and a basin under the chin. Older children can clear the nose by blowing, or a small rubber ball syringe may be used. The stream is directed along the floor of one nostril, while the child breathes deeply through the open mouth, each nostril being syringed alternately. Very little force should be used in any method, for fear of infecting the middle ear. Irrigation should not be used for children under four years of age. Douches must be unirritating. Various lotions may be mentioned. (1) Normal saline; (2) Dobell's solution: sod. bicarb. dr. 1, sod. biborat. dr. 1, glycerin. acid. carbolici drs. 2 (or Listerine drs. 4), water ad oz. 10; (3) equal parts of common salt, bicarbonate of soda, and biborate of soda, one teaspoonful to half a pint of water; (4) sodium chloride gr. 2 to 5, potass. bicarb. gr. 2 to 5, boric acid gr. 5 to 10 to the ounce of water; (5) sod. bicarb., sod. bibor. aa. gr. 3, ac. carbol. gr. 1, sugar gr. 5 or glycerin m 20, to the ounce of water; (6) sod. biborat. gr. 10, sod. sulphat. gr. 5 to one ounce of water; (7) one part each of sod. bicarb., sod. biborat., pot. chlorat., and two of white sugar, one teaspoonful to half a pint of water. As an astringent lotion, sulphocarbolate of zinc. grs. 5 to the ounce, is as good as any. It can be used as a spray or with a dropper. Hazeline, 20 drops to the ounce, may be used, or a powder of salicylic acid gr. 3, tannic acid 1 dr., boric acid 1 oz. Passive hyperæmia is also recommended. A flannel bandage, damped with a spirit lotion to ensure shrinking, is applied somewhat tightly round the neck.

2. *Rhinitis due to adenoids* causes a chronic, irritating discharge, generally mucoid, sometimes mucopurulent and sanious. Occasionally it is unilateral. Sometimes it is continuous, more often it varies from

time to time. The discharge and the excoriation of the external nares may be the only indications of the presence of adenoids. Eczema, impetigo, swelling of the upper lip, and epistaxis are not infrequent sequelæ. The condition is really a simple chronic rhinitis or post-nasal catarrh, a variety of snuffles, often occurring in acute and recurrent attacks, and its true causation is liable to be overlooked.

3. *Snuffles*, due to congenital syphilis, comes on later in life than the acute purulent rhinitis of infancy and the acute coryza so apt to develop in the newborn. Infection at birth produces it in a day or two. Congenital syphilis causes snuffles in two or three weeks, and a family history or other evidence of the disease may be obtainable. Many cases of simple coryza in infancy are wrongly ascribed to syphilis. The inflammation is usually sub-acute, chronic and persistent, with muco-purulent discharge, nasal obstruction, thickening of the mucous membrane, and the formation of crusts with raw mucous membrane underneath. It may be acute, and followed by sloughing of the mucous membrane and separation of bone. Later in childhood congenital syphilis causes gummatous periostitis and necrosis of cartilage and bone, ulceration, and foul ozæna. Use yellow oxide of mercury ointment (1 in 8).

4. *Acute purulent rhinitis of infancy* is due to infection at birth, by gonorrhœal or leucorrhœal discharge. It comes on very shortly after birth, with redness, swelling, œdema, and a purulent discharge, and prevents sucking. In later life it may be due to gonococcal or pneumococcal infection, and may occur in measles. Cleanse with alkaline lotion and paint with protargol, 1 to 2 per cent., or nitrate of silver, 1 per cent.

5. *Nasal diphtheria*—pseudo-membranous, membranous, or fibrinous rhinitis, is difficult of classification, for some of the cases are apparently diphtheritic, while others cannot definitely be proved due to this cause. Nasal diphtheria may be characterised by mild signs, although there is much membrane, perhaps only visible with a speculum. Occasionally there is no membrane, though pure cultures of the typical bacillus can be obtained. The organism does not seem to produce enough toxins to cause severe symptoms, and the general health is little impaired. It is rare under three years of age, but 90 per cent. are under ten. Often it follows scarlatina. There are pallor, languor, anorexia, and fever up to 100° F., with clear, watery, acrid, irritating nasal discharge, unilateral in one-fifth of the cases. It causes redness and soreness of the alæ and lip, sometimes slight bleeding, and nasal obstruction. Later the discharge becomes purulent, may contain shreds, but is not often offensive. The mucosa is congested, covered with a white film, or a gelatinous, tough, yellowish membrane. It rarely spreads to the larynx or pharynx, but may cause otitis. Finally only blood and muco-pus are exuded. It lasts from one to three months and is not followed by paralysis.

MEDICO-LEGAL POINTS.

MEDICAL EXPERT EVIDENCE.—III.

MEDICAL men may testify as to the probable result of known injuries upon the health and life of the person injured, and as to the probable duration of injuries, and as to the probability that the injury will cause future pain and suffering, as well as the effect of the injury upon the future ability to work or attend to other affairs of life of the person injured, and as to ultimate curability, or probable recovery, or permanency of the effects of the injury, and as to the liability that the injured person will be subject to other dangers resulting from the injury; such opinions are not objectionable as speculative, since that which happens in the natural and ordinary course of events may be assumed to happen with reasonable certainty. Likewise the question whether a described accident was capable of producing certain physical results is a proper one for a medical expert; and a physician may give his opinion as to the probability of the recurrence of a condition resulting from an injury, and as to the probable necessity for future medical attendance. The opinions of medical men as to the location, character, and probable consequences of wounds are competent evidence in a prosecution for homicide, or assault with intent to kill. And this is the rule whether based upon observation or upon a description of the wounds by other witnesses. And a surgeon is competent to express an opinion as to whether or not a wound is a mortal one, and as to the nature of the instrument which would produce such a wound, and as to whether a wound was inflicted before or after death; and he may give his opinion as to the probable cause of a wound, and as to the amount of force necessary to cause it. The cause of the particular wound in question, however, is a question for the jury, and not one upon which an expert may express an opinion. And so is the question whether a wound was accidentally or purposely inflicted.

A duly qualified medical expert, however, who examined the body of a deceased person shortly after the infliction of a wound causing his death, may give an opinion as to whether it was produced by a near shot or one fired from a distance. And a surgeon of experience who had seen many gunshot powder marks and powder burns, and knew of his own knowledge the distance between the discharged weapons and the bodies fired upon, is sufficiently qualified to give an opinion as to the distance at which a certain pistol would produce powder marks on the skin; though the rule would be different if the witness did not appear to be thus properly qualified as an expert on powder marks. A physician making a post-mortem examination of a person killed by a blow upon his head is competent to give an opinion as to the direction from which the blow was delivered. And a medical expert may give his opinion as to the range, after entering the body, of a shot which caused death, taking into consideration the bone, muscle, and other substances through which it had to pass.

Stains of blood found upon the person or clothing of a deceased person are recognised as an ordinary indication of homicide, and are competent evidence of its commission even in the absence of proof that the stains were in fact blood-stains, constituting primary and legitimate and not secondary evidence of homicide, its weight being a question for the jury. And the witness need not be a chemist or physician or expert to enable him to testify that certain spots or stains were in fact blood-spots or blood-stains; and the inferences as to the relative positions of two combatants based upon the appearances of blood-stains are within the domain of common experience, and not a matter of science. In a case resting upon circumstantial evidence, however, proof of apparent blood-spots, without chemical analysis, does not warrant the legal presumption that the substance was blood, because of the similarity of stains made by other substances; and where an effort is made to distinguish between human blood and that of some animal, the question is one of science, requiring the application of great skill and knowledge, upon which the testimony must be that of an expert.

A medical examination and chemical analysis are more important in cases of alleged poisoning than symptoms; and proof of symptoms of poisoning—especially when unsatisfactory and unreliable—will not warrant conviction for poisoning in the absence of chemical analysis and application to the stomach and its contents of approved tests for the discovery of poison. And medical men may testify, in a prosecution for poisoning, to a chemical analysis made by them of the stomach of the deceased, and to the tests applied for detecting the existence of poison, though they are not professional chemists, and have no experience in the analysis of poison; but a chemical analysis for the purpose of discovering poison would be of less weight if conducted by persons without practical experience than if conducted by practical chemists whose conclusions were based upon experience as well as upon study. The question of the condition of the stomach of a person alleged to have been poisoned is likewise one involving skill and science, and a proper subject for expert testimony. But specialists of experience are alone competent to testify as to the effect of particular drugs upon the human system, though medical experts may properly testify as to the effect of poisons from information derived from the writings of standard authors on the subject. And one who had made a chemical analysis of the stomach of a person alleged to have been poisoned may testify as an expert concerning the effect of strychnine upon the human system when he is a chemist and toxicologist, though not a physician and surgeon.

A medical expert who has examined or treated a person claiming to be ill or injured is competent to give an opinion from the general appearance, actions and looks of the patient, and from his

examination and statements as to whether or not his trouble or injury was imaginary, feigned, or real. A physician is not competent, however, to give his opinion that a plaintiff in an action for personal injury is shamming before the jury, a physician being no better qualified on that subject than the jurors. And a medical expert cannot give his opinion on the question whether or not a person claiming injury or illness is a malingerer. And an opinion that a person was simulating pain or suffering is incompetent, when based upon personal acquaintance with such person, or some other reason not within the range of expert testimony.

The jury is the judge of the weight to be attached to the opinions of medical experts. Jurors are not controlled by medical opinions; the medical expert cannot be put in the place of the jury and allowed to decide the case. Such opinions are to be considered in connection with the other evidence, and given just weight; but the jury must determine for itself, from the whole evidence, the question at issue, and their value must be made to depend upon the agreement or non-agreement of the facts assumed as their basis with the actual facts of the particular case and upon the opportunities of the witness to acquire skill and knowledge and the use he makes of these opportunities.

When, however, the case concerns a highly specialised branch of the medical art, with respect to which a layman could have no knowledge, the court must be dependent upon expert testimony; and in such cases, in the absence of such evidence, it is improper to submit the case to the jury. And evidence of medical and scientific persons, physicians, surgeons, and chemists, by whom a body had been inspected and examined either at the time of its discovery or shortly after, and their opinions with reference to it are competent and of great value in a prosecution for homicide, in establishing the *corpus delicti*. But such opinions can only be regarded as scientific, so as to be entitled to additional weight so far as they relate to physical man, and his diseases, and their means of cure. And where a medical opinion is given by a physician, it becomes a proper subject for cross-examination for the purpose of ascertaining his qualifications and fairness and impartiality, and the consequent weight to which his opinion is entitled; and for this purpose he may be asked as to his experience and reading in similar cases, and as to his treatment of the patient and the nature of the case in hand. Nor is it improper on cross-examination to ask physicians who attended an injured person by whom

they were sent and paid. And it may be shown that a medical expert charged or expected to receive greater compensation than the fees allowed by law, and that he is in the employ of one of the litigants regularly or frequently as an expert witness.

The object of calling an expert into court being to obtain a personal opinion from him, together with the reasons therefor, it has become a rule of very general adoption not to admit professional books in evidence, nor even to allow the expert to quote their opinions by substitution for his own. Yet he may be asked the ground of his judgment and opinion, which might in some degree be founded on these books, for it could be easily shown in any case that no man had ever framed an opinion without elementary assistance from some objective source, and as books are the chief instructors of educated men, while experience is only the practical application of their teachings to the necessities of professional life, it follows that some book knowledge is, in fact, at the bottom of all opinions. The expert, of course, may consult them as much as he pleases before going into court, and may even refer to them as representing the accepted opinions of the profession, but he cannot read from them. The reason of this rule is founded on the principle that the expert is called to express a personal opinion upon a state of facts of variable interpretation, and if a book could pronounce it as well it would be superfluous to call him. He is summoned for the purpose of giving aid, through the employment of his professional experience, to the administration of justice, and when he undertakes to read from books a conclusion which he claims to adopt as his judgment in the premises, he certainly does to that extent attempt to substitute another's opinion for his own. Yet he may, after stating his opinion, give the reasons for it, as founded upon the concurrent observation and experience of others recorded in their works, and thus contributing to furnish him with that general knowledge, by means of which he is confirmed in his competency to act as a skilled witness. Accordingly it has been held that medical witnesses, in giving their opinions as experts, are not confined to the results of their own observation and experience, but may give opinions based upon information derived from books. But the naked statements of books of science, not verified by his own experience, are of no more authority than the books themselves, and the opinions given in such books are not legal evidence.

OTOLOGY.

OTOSCLEROSIS.

THERE is a very important, because very common, form of deafness, the real nature of which has only recently been understood, and which appears to be not yet generally recognised by the profession at large. This affection is known as "otosclerosis," and, although not a correct description of its patho-

logy, the title has been generally adopted and will doubtless be retained. This disease is marked by definite characteristics which render its recognition in uncomplicated cases a comparatively easy matter. The principal features are increased bone-conduction and a negative Rinne's test, signs found in cases of

middle-ear catarrh, combined with a practically normal drum-membrane and a patent Eustachian tube, inflation through which causes no improvement.

PATHOLOGY.

The Eustachian tube, the middle ear, and the membrana tympani are normal; the pathological changes which are the cause of the affection occur in the neighbourhood of the stapes and fenestra ovalis. The fundamental change is the absorption of the normal tissues and their replacement by a new growth of spongy bone. The stapes becomes fixed in the fossa ovalis by extension of bone along the foot-plate, or by bony bridges from the wall of the labyrinth to its crura. In advanced cases the entire fossa ovalis may become filled with spongy bone, and sometimes bony bosses protrude into the interior of the labyrinthine capsule. As time goes on the newly formed spongy bone becomes gradually denser and less distinguishable from the normal bone adjacent to it.

ETIOLOGY.

It may be said at once that this is not a true inflammatory process, and that there is a complete absence of signs of inflammation or any history of previous inflammatory disease in these cases. But we are a long way from certainty as to the underlying cause of the process. It may be, as has been suggested by Siebenmann, that it is the final stage of the developmental process, which is normal in all bones except the petrous; numerous remnants of the primary cartilage are to be found in the neighbourhood of the fenestra ovalis, and possibly the conversion of these into bone, by a kind of over-completion of development, may be at the root of the process; for the normal development of the petrous bone is arrested at birth, as it has by then attained its full size. Gray has propounded the theory that the original lesion is a necrosis of the parts followed by aseptic absorption and reposition, this necrosis being due to malnutrition; certain clinical facts seem to favour this view, for anæmia, rheumatism, and pregnancy predispose to the affection, which is nearly always bilateral and far commoner in women.

Otosclerosis is a disease of early adult life and is most often first noticed between the ages of twenty and thirty, and, as just mentioned above, is much more often found in women than in men; the proportion is variously stated, but the average may be fixed at about two to one. Heredity has a very marked influence, and a history of inheritance can be obtained in a large proportion of cases. Of exciting causes, anæmia, pregnancy, and severe exposure to cold appear to be definitely proved to conduce to the affection; and patients suffering from otosclerosis tend to become worse with each successive pregnancy. The disease has also been ascribed to gout, rheumatism, and syphilis, but, perhaps, without sufficient proof. As regards the latter, there is no association whatever between otosclerosis and the ordinary signs of congenital syphilis; acquired syphilis is common in men, whereas otosclerosis is much more often found in women, and antisiphilitic treatment is absolutely without influence on the latter disease.

SYMPTOMS.

The chief symptom is very gradually increasing

deafness. In the final stage it is always bilateral, but at first, and sometimes for a long time, the trouble may be limited to one ear. The progress may be continuous or may be stationary for long periods, alternating with times of more rapid deterioration. Unless the internal ear is also affected the deafness is never absolute, and loud speech can still be heard. Tinnitus is very frequently present and may be extremely severe; in some cases it is constant, in others intermittent. Vertigo is comparatively rare and seldom severe. The phenomenon of hearing better in a noise, known as "paracusis Willisii," is nearly always present; it is an early symptom in otosclerosis and a late one in catarrhal deafness, an observation which supports the long-held opinion of the unfavourable significance of this symptom.

PHYSICAL SIGNS.

The drum membrane is normal, unless the case is complicated by the presence of catarrhal otitis. Sometimes there can be seen a red reflex shining through the drum and due to hyperæmia of the promontory; this is very characteristic, though by no means always to be seen. The Eustachian tubes are fully patent and inflation generally produces no improvement whatever. Three important signs can be elicited, namely, increase of bone-conduction, a negative Rinne's test, and elevation of the lower tone-limit. Increase of bone-conduction is always present unless the labyrinth has become invaded, which often occurs in the latest stage of the affection, and then the bone-conduction becomes diminished. So also a negative Rinne's test, the tuning-fork heard longer on the mastoid than at the meatus, may become modified by affection of the labyrinth, but by this time the deafness has become extreme. Loss of perception of the lower tones of the scale is a very important sign of fixation of the stapes, and therefore occurs constantly in otosclerosis, though it may also occur late in cases of catarrhal and post-suppurative deafness. Gelle's test for fixation of the stapes may also be used; a tuning-fork is placed on the mastoid while the air in the meatus is compressed with Siegle's speculum, the sound is lessened on compression if the stapes is movable but is unchanged if it is fixed.

TREATMENT.

No method of treatment as yet discovered can claim any decided success. Potassium iodide and thyroid extract have their advocates. Phosphorus in doses of 10 minims, gradually increased to 30 or 40, of a $\frac{1}{10}$ per cent. solution in almond oil, prescribed in capsules, has been recommended. Of local measures, the nose and naso-pharynx are usually normal, and treatment of these regions has no effect; inflation is useless in cases uncomplicated by catarrh. In a certain number of cases pneumomassage, applied by means of an electrically driven air-pump inserted in the meatus, has produced distinctly good results. In most cases it does no good, but it is the only form of treatment which holds out any promise, and is therefore worth a trial if the patient wishes to attempt it after being informed of the problematical nature of the result. It would probably be more often successful if carried out at an earlier stage.

MOTURING NOTES.

NOTES ON CARS AND GARAGES.

BRITISH AND FOREIGN CARS: A COMPARISON.

SEVERAL correspondents have recently applied for information and advice upon a matter which is of general interest to medical motorists. This is the comparative merits of the British small car of moderate price and the more expensive foreign-built car of approximately equal size and power. It is, therefore, worthy of note that at the last Olympia Show several continental experts asserted, and with some truth, that the price at which some of the medium-powered chassis are placed upon the market absolutely precludes the use of the finest material and workmanship. They admitted that during the past few years British firms have made enormous progress, and they quite realised that fewer French cars are now being sold in England. At the risk of being thought unpatriotic, I must say that I am inclined to agree with the assertion that, with the exception of a few of our leading manufacturers, we in this country are still a long way behind the French in the matter of automobile design and workmanship. As regards the building of bodies, it is well known that the work of a first-class British coachbuilder cannot be equalled by any foreign firm. In England it is possible to buy medium-powered cars in great variety at prices very much lower than anything that can be purchased abroad. These cars for a year, or possibly longer, will run beautifully, giving absolutely no trouble. But only too often at the end of this period of running they seem to go all to pieces, and thenceforward are a continual source of trouble and expense in repairs and replacements.

BAD CHEAP CARS.

There is no such thing as a really cheap car, because if it is very cheap in the beginning it will sooner or later prove to be very expensive. First-class materials and first-class workmanship are not, and never can be, cheap, and the sooner the British buyer understands this the better it will be for him in the long run. For instance, it is not so long ago that a British car, made by a well-known manufacturer, ran practically 15,000 miles non-stop, averaging something over twenty miles to the gallon. This car was then dismantled under supervision, and it was discovered that a little over £2 would cover all the necessary replacements. Now, 15,000 miles represents the distance travelled by the average motorist in three years, and although this car was not cheap in the first instance, it was most certainly cheap in the long run. Nothing causes more annoyance and disappointment than a car which, after doing good service for the first twelve months, continually goes wrong in the second year. It destroys all the pleasure of motoring, because each journey is begun with the certainty that sooner or later, somewhere or another, a breakdown is inevitable. The consequence is that at last the breaking point of patience is reached, and the car is advertised for sale, and probably disposed of for a mere fraction of its original

cost. Whereas, had a really first-class car been bought in the first instance, this would have done honest, reliable work for several years, with a maximum of comfort and satisfaction; and when its owner decided to replace it by a more modern type it would have realised a good price in the second-hand market as a "going concern."

GARAGES AND GARAGE SKATES.

Nothing can be nicer than a well-appointed garage, though, unfortunately, all are not rich enough to afford this luxury; and, moreover, sufficient space is not always available. The problem is usually how to make an existing outbuilding or coach-house serve one's purpose. The trouble generally arises when one wishes to manoeuvre the car inside the shed or turn it within a small space. A turntable, though undoubtedly a great labour-saver, is exceedingly expensive, and beyond the financial resources of the average owner.

Garage skates, as they are styled, are inexpensive, and by their use a car can be turned in any direction. A pair are simply put on the wheels, and the car is pulled round with a very little expenditure of energy. A device such as this frequently saves broken tail lamps and damaged wings, minor accidents which are inseparable from turning in a small space. However small the garage, always make a point of fitting as large a door as possible. The best design is a door on rollers extending the whole breadth of the garage. If a pit is fitted, make it a rule never to leave it uncovered. Otherwise the car will be driven into it some night.

THE CLUTCH AND THE FLY-WHEEL.

The importance of having a good clutch cannot be over-estimated, since an inferior clutch renders driving a source of pain and grief. It certainly seems as though the art of clutch design has improved but little during the last few years. On some of the old cars—Panhards, Charrons, etc.—the leather-faced cone clutch seldom, if ever, gave a moment's trouble, and these clutches were nearly always smoothest in engagement. The experience of many drivers with metal-disc clutches, other than those of high-class cars, has been far from happy. Sooner or later they have given rise to trouble. Moreover, these clutches need accurate and skilful adjustment, and the lubricant must be chosen with the utmost care, or dire results will follow. Provided a leather clutch is of proper design, it should give no trouble so long as care is taken to dress it occasionally with cotton or castor oil, and the possible necessity for replacement of the leather is considered at the end of twelve months. In addition to the type of clutch, prospective buyers should pay attention to the fly-wheel, insisting that a sufficiently large fly-wheel is used, since on this depends largely the smooth and flexible running of the car, especially when of the single-cylinder type; and many makers who build this type of car are now fitting much larger fly-wheels than formerly.

THE ROYAL ARMY MEDICAL CORPS SECTION.

MEMORANDUM ON THE TRAINING OF THE TERRITORIAL MEDICAL SERVICE.

AN important memorandum has recently been issued by the Army Council indicating the lines on which the training of the different branches of the Territorial Medical Service should be conducted, and it is very satisfactory to note that it is made an opportunity for expressing high approval of the work done by the medical units during last year's training season, notwithstanding the many difficulties inseparable from the early stages of any large scheme of reorganisation.

Taking first the Medical Service with regimental units, the memorandum impresses on regimental surgeons that they are not relieved of the duty of caring for the sick of their units because a field ambulance is present in camp. This fact is not sufficiently recognised. A field ambulance goes to camp for combined training in field work with the brigade to which it may be attached, and if its work is to consist of looking after the sick in camp it will lose the only opportunity it has of making itself efficient for service in the field. Besides, to do so would take it out of its proper zone of work. It is a fundamental principle that a medical unit with a field army should never be depleted either in personnel or material for any outside duties.

In training camps during peace the memorandum lays it down that soldiers unfit to remain in their lines may be sent for a period of two days to the field medical unit, but not for longer; but it favours rather the formation of a specially organised camp hospital under the senior medical officer for the treatment and disposal of the sick and injured of the various units in camp. Such an arrangement recommends itself on every ground, and it supplies what has been found to be a deficiency in the present scheme of the Territorial Medical Service. A camp hospital of this kind would correspond to the "Clearing Hospitals" of the Regular Army, the need for which is now acknowledged, and it would give the field ambulances full opportunities for their field training. The establishment of these camp hospitals at once raises the question as to where their personnel is to be obtained. They cannot be staffed by fatigue duty men, who know nothing of nursing; nor are the regimental stretcher-bearers either qualified or available for the work. Men with a knowledge of hospital duties are needed, and some plan will have to be devised for furnishing these. They might be obtained from the certificated men of the Ambulance Corps of the St. John's and St. Andrew's Ambulance Associations in England and Scotland respectively, receiving pay while in camp, or they might be provided for by the enrolment in every unit of an ambulance squad of six men, who would be borne as supernumerary on the strength of the regiment and be specially trained by the regimental surgeon for the work. This latter plan has much to recommend it, as it would furnish a very valuable body of men with a knowledge of nursing available for staffing the clearing hospitals which the Territorial Force will require in time of

war just as much as the regular army. We note with satisfaction that the memorandum announces that it is proposed to issue one medical companion and water-bottle and one surgical haversack and water-bottle to each headquarter and regimental unit, and we hope that funds will allow of this being done without any delay, as the absence of such equipment in the past has been in our opinion a grave defect.

Passing next to the subject of camp sanitation, the memorandum dwells on the great need for a preliminary training by lectures and demonstrations of the sanitary section of each unit before going to camp, where the teaching can be made, as it ought to be, in every way practical. What is said about the sanitary section applies equally to the water-duty men when they are provided and trained by the unit itself, but the intention at present seems to be to enrol these men as a separate body, attach them to the divisional school of instruction for training, and then distribute them to units when they go into their annual camp. Very properly the memorandum insists on the necessity of carefully considering the important questions of water-supply, refuse, and sewage disposal before a camp is occupied. Of this there can be no doubt, and as it is suggested that definite plans and instructions should invariably be drawn up on these points after the site has been visited and reported on by the divisional or other sanitary officer, we would further recommend that the prospective senior medical officer of the camp or another medical officer appointed by him should obtain permission from the A.M.O. to pay a preliminary visit of inspection to the camp some time before its occupation, so as to make himself acquainted with the water supply and to satisfy himself that it is protected from all danger of pollution in the arrangements for its conveyance and distribution to the troops.

Another procedure, too, that we think should always be followed is to arrange for a medical officer accompanying the fatigue party that goes in advance to prepare the camping ground for the main body. Unless this is done and proper precautions taken, the sanitary section of the unit may arrive to find the camping ground fouled and dirty, making it sometimes very difficult to have matters cleaned and put right. Especially is this the case if another regiment has occupied the ground previously, and has not left the camp properly cleaned. If this should happen, the presence of a medical officer with the advance party would be advantageous, as he could make a report on the exact conditions found, and thus help to put a stop to a form of carelessness that might have serious dangers on active service. Every outgoing regiment should leave its camping ground in a clean and sanitary condition.

Only a brief reference is made in the memorandum to the general hospitals. It is recommended that at present their personnel should not attend

camp, as their training is best carried out in a military hospital. Probably the Herbert Hospital at Woolwich would furnish the best course of instruction in the very important duties these men have to discharge.

It is to the training of the field medical units that the memorandum devotes the greater part of its remarks, and there is laid down at once the excellent principle that a complete study of medical duties in the field is the main point to be kept in view. With this we are in thorough accord. In the past a great deal of useful time was wasted in combined training with other branches of the service before ever the men of the old bearer companies and field hospitals knew their respective duties. In view of the new constitution of the field ambulances, which combine the functions of the old bearer companies and field hospitals in the shape of their bearer and tent divisions, it is most essential that the personnel should have a thorough training in these dual duties, especi-

ally as the three sections into which a field ambulance can be split up have each their share of bearer and tent divisional work. To enable this to be done satisfactorily, the memorandum advises that not only should a unit train together as a whole, but normally all the field ambulances of one division should train in one camp at one time, and not necessarily, for the present, with other troops. It is unnecessary to give in detail all the suggestions contained in the memorandum as to the lines on which the instruction of the field ambulances should be carried on both as regards the preliminary work in the drill halls and afterwards in camp. Suffice it to say that they outline a very high standard of proficiency, but one we feel certain not beyond the intelligence and energy of the officers, non-commissioned officers, and men who now fill the ranks of the Territorial Medical Service, whose sole desire it is to be in every way efficient for the duties and stress of war.

THE DEATH OF THE EMPEROR OF CHINA.

THE Edicts and Memorials issued in connection with the death of their Imperial Majesties the Emperor of China and the Great Empress Dowager contain some curious and almost amusing reading.

An Imperial Edict issued on November 14, 1908, runs as follows:—

From the beginning of autumn of last year our health has been poor. We ordered the Tartar Generals, Viceroy and Governors of every province to recommend physicians of ability. Thereupon the Viceroy of Chihli, the Liang Kiang, Kiangsu and Chekiung recommended and sent forward Ch'en Ping Chun, Ts'ac Yuan Weng, Lu Yung Pin, Chou Ching Tae, Tu Chung Chun, Shih Huan, and Chang P'ang Nien, who came to Peking and treated us but their prescriptions have given us no relief. Now the negative and positive elements (Yin Yang) are both failing. There are ailments both external and internal, the breath is stopped up, the stomach is rebellious, the back and legs painful, appetite failing. On moving, the breath fails, and there is coughing and panting. Besides, we

have chills and fever, cannot sleep at night, experience a general failure of bodily strength which is hard to bear. Our heart is very impatient and now the Tartar Generals, Viceroy and Governors of every province are ordered to select capable physicians regardless of their official rank and send them quickly to Peking to await summons to give medical aid. If any can show beneficial results he will receive extraordinary rewards and the Tartar Generals, Viceroy or Governors who recommend him will receive special grace. Let this be published.

In spite of the efforts extended on behalf of the suffering Empress by the physicians named, her Majesty "ascended on the dragon to be a guest on high." Four days later a further edict was issued in which these practitioners were "degraded two steps and left in office"! Certain other physicians were "degraded and will work without stipends as punishment." Note the above are the regular palace physicians.

THERAPEUTIC NOTES.

The Active Principle of Oil of Juniper.

The "characters and tests" of oil of juniper as given in the British Pharmacopœia are untrustworthy, and pharmacologists are endeavouring to define the limits within which genuine oil should fall. At the present time it is to be feared that there is a considerable amount of inferior or adulterated oil on the market—in fact, it is quite possible to make a spurious oil of juniper that will fulfil the Pharmacopœia requirements. The question was thoroughly discussed at the recent meeting of chemists in Manchester, but until it has been decided whether the properties of the oil are due to pinene or to cadinene it will be difficult to fix a standard. In the meantime it would appear advisable to use English oil from a reliable source.

Dried Extract of Uva Ursi.

UVA URSI has long been used as a diuretic and urinary antiseptic remedy, but chiefly in the form of the infusion. A dried extract of the leaves of uva ursi is now obtainable, and it may be prescribed either by itself or in conjunction with salol, with hexamethylene-tetramine, or with acetyl-salicylic acid. It is conveniently given in cachets, and the drug, either by itself or associated with each of the others mentioned respectively, appears to be the basis of the tablets sold as Uropural, Uropural II., Uropural III., and Uropural IV. The dose of the dried extract of uva ursi is from 4 to 8 grains three times a day, and excellent results are claimed to have been obtained both from it by itself, and from its use along with other antipyuric remedies.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

WANTED—A HOSPITAL ADMINISTRATOR.

THE JERSEY HOSPITAL CASE.

THE Jersey Hospital libel case, concluded in Jersey last month after a hearing which lasted many days, possesses features of more than local interest. The plaintiffs were the Committee of Public Assistance appointed by the States of Jersey, and are the managers of the Jersey General Hospital; the defendant, Mr. H. G. Mirehouse, is a resident in Jersey, and had published in the local press towards the end of last year a letter containing grave reflections upon the management and administration of the hospital. In view of the result of the case, it is proper that the parts of the letter alleged by the plaintiffs to be defamatory should be set out in full:

(a) Would you be surprised to hear, sir, that instances have been known of patients losing a member by—no, not the neglect—but the insufficient technical and sanitary knowledge of attendants?

(b) Is it a fact that poor patients, perhaps during their last moments upon earth, may be troubled by the senseless and merely curious visits of casual acquaintances or stray visitors?

(c) Would you be surprised to hear that patients suffering from phthisis—that most insidious and highly contagious or infectious scourge of modern as of ancient times—are isolated by being placed in a separate ward, just across the passage, and that tiny children as well as patients wander hither and thither *à volonté*? This, at least, is not the fault of the medical or nursing staff, but the grievous want of proper accommodation.

(d) I have heard tell of a poor sufferer dying of consumption who protested that he could not eat beef and vegetables, but that, none the less, no alteration was made in his diet.

(e) I have heard tell of a patient who, after an operation, was attended by a nurse who had charge of a diphtheria case, with the natural result.

(f) Also that contagion has been, on other occasions, conveyed by insufficient or sufficient (*sic*) segregation or disinfection.

In view of the importance of the matters in issue the Attorney-General was, on the application of the plaintiffs, made a party to the case as representing the public, a form of procedure with which we are unfamiliar in this country, but which afforded the Attorney-General an opportunity of summing up the case impartially to the Court in his concluding speech—a function which would, of course, in England be performed by the presiding judge in his address to the jury. In Jersey, however, the case was heard before the Bailiff and two Jurats only.

Few graver libels than those indicated above could possibly be published on the managers of a hospital at the present day. It is sufficient to quote the innuendo which the plaintiffs themselves sought to place upon the words in their original “remonstrance” addressed to the Court. They complained that the words were “calculated to shake the confidence reposed in the said committee in leading to

believe that they have neglected to discharge the duties vested in them by the States of this Island in assuring the proper administration and government of the said public institution, and that they have allowed a state of things to exist which jeopardises the health and places in peril the lives of inmates entrusted to the care of the staff of the said hospital.” Yet the judgment of the Court found that the libels (a), (b), (e), and (f) had been proved in substance and in fact; that (c) had been proved in substance and in fact, except in regard to the tiny children, and that the defendant had alone failed to prove (d). And with regard even to (d), it is clear, from his concluding speech, that the Attorney-General regarded strict legal proof of the allegations as alone wanting. Having regard to these findings, the final result of the proceedings, so far as the defendant is concerned, is surprising. He is fined the nominal sum of one shilling, and has to pay the Attorney-General’s costs; he is condemned to pay £1 damages to the plaintiffs, and each party is left to bear their own costs. The pitfalls of a plea of justification in a libel case are well known, and the position of a defendant who fails to prove all his charges up to the hilt is never an enviable one, but surely a procedure which produces the results in Mr. Mirehouse’s case is open to serious criticism. That no part of his costs should be borne by the persons whom he has charged with, and proved to be guilty of, negligence and incompetence in discharge of their public duties, is hard enough, but it is deplorable that he should be made to bear the costs of the representative of the public, to whom he has by his action rendered such great and signal service.

The state of affairs disclosed by the evidence given in the case is such as to demand instant and ruthless action by the people of Jersey. It must be remembered that the hospital is a public institution, subsidised with public money, and, it is to be assumed, more open to direct public control than the majority of large hospitals in this country. The greater the trust, the greater the responsibility, and we do not doubt that after the lamentable disclosures of the recent trial, a strong effort will be made, not only to rid the hospital of its existing management, but also to bring it in every respect into line, as regards efficiency, scientific administration, and public utility, with the best institutions of the same kind in the British Isles. If this desirable consummation is brought about the sacrifices which Mr. Mirehouse has been forced to make in defence of his public-spirited and courageous action will not have been in vain, and a blot will have been removed from the fair fame of a progressive community which its public men should never have allowed to rest upon it.

NEWS AND COMING EVENTS.

LADY MIDLETON has consented to open, on June 18, the convalescent home at Worthing now in process of erection as an adjunct to the Royal Surrey County Hospital, which is largely due to Mr. G. Prentiss Shepherd's donation of £10,000 towards its erection and endowment. A further sum of £1,000 has been received by this hospital for the provision of an x-ray department from Miss Helen Crooke as a memorial to her late father, Mr. Frederick Augustine Crooke, who was Mayor of Guildford in 1877.

At the University of London the following elections to studentships were announced on June 5: Miss Mary Taylor Fraser, B.Sc., to the Lindley Studentship, of £100, open to students qualified to undertake research in physiology, and tenable in the Physiological Laboratory of the University.—Mr. G. Roche Lynch, St. Mary's Hospital, to the University Studentship in Physiology, of £50, open to students qualified to undertake research in physiology, and tenable for one year in the Physiological Laboratory of the University or of a school of the University.

The case of *Fergusson v. Malvern Urban District Council* recently reached its final stage of appeal in the House of Lords. It will be remembered that Dr. J. C. Fergusson, lessee and proprietor of a hydropathic establishment at Malvern, alleged that the water, which led to an outbreak of enteric fever in his institution, became polluted by the negligence of the defendants, who allowed a well from which he, to their knowledge, drew a part of his supply, to become contaminated with sewage by percolation. He claimed the right to take this water in future free from pollution, and asked for damages based on the compensation he had had to pay to those who became ill while in his house, and for loss of business and injury to his reputation. The action was originally tried before Mr. Justice Lawrance and a special jury, and a verdict for £7,500 was returned for the plaintiff. The Court of Appeal set aside that verdict, since the plaintiff had failed to establish any proprietary right in this water supply, and, therefore, took it at his own risk. The Lord Chancellor upheld the decision of the Court of Appeal in this case, which, he said, presented many difficulties. The plaintiff, to succeed, must show that he had some right to take the water from this spring, and he failed to show any such right. His Lordship failed to see how, if a new trial were ordered, the plaintiff could succeed, and he moved that the appeal should be dismissed, with costs. The other Lords concurred with some reluctance.

At a recent meeting of the Metropolitan Asylums Board a report was read from the Hospitals Committee with reference to a letter from Dr. H. R. Kenwood, Professor of Hygiene at University College, London, inquiring on behalf of his class in Public Health whether "the existing conditions under which they are at present signed up for the three months' attendance upon a fever hospital which is required by the regulations for the diploma" can be modified. The committee, after considering the matter very carefully, recommended: "That, subject to the sanction of the Local Government Board, the existing facilities for the study of hospital administration afforded to candidates for the Diploma in Public Health be supplemented by the institution at two of the hospitals, as an experiment, of classes for the instruction of candidates in hospital administration without requiring them to enter into residence, and that the Local Government Board be furnished with a copy of the report on the subject by the medical officer for the general purposes"; and this was agreed to without comment.

MRS. ANNIE JANE HOLBORN, of Campden Hill, W., who died in April last, amongst many other charitable bequests, left £5,000 to St. Bartholomew's Hospital; and £500 each to the Kensington Dispensary and Children's Hospital for a "Kensington Chapel" cot, and to the Home for Confirmed Invalids, Highbury.

A CONFERENCE on "The Medical Inspection and Treatment of School Children" will be held at the Incorporated Institute of Hygiene, 34 Devonshire Street, Harley Street, W., on June 21. It is intended to consider the problem of "How to Deal with Defective Children," and a number of prominent medical men have arranged to take part in the discussion. Sir William Bennett, F.R.C.S., K.C.V.O., will preside.

At the last meeting of the Metropolitan Asylums Board the receipt of a letter was reported from the Local Government Board stating that they have no objection to the experimental establishment of classes at two of the managers' hospitals for the instruction of candidates for the diploma in Public Health in hospital administration, provided that the proposal could be carried out without cost to the rates.

THE Public Health Department of the City of London has issued a circular, for the guidance of persons dealing in meat, drawn up by its Medical Officer of Health, Dr. Collingridge, and Mr. King, Veterinary Inspector to the Corporation, which describes the indications of tuberculosis both in the carcass and in the living animal. Copies can be obtained on application at the Public Health Department at the Guildhall.

THE Eleventh Annual Conference of the American Hospital Association is announced for September 21 to 24 inclusive. The Conference will be held at the New Willard Hotel, Washington, D.C., and a preliminary programme has already been issued, giving the names of members of the various committees of the Association, and a list of the addresses, papers, reports and exhibitions which will follow the Address of Welcome and the Presidential Address on the morning of Tuesday, September 21. Particulars of hotel tariffs and railway facilities are also given. The final programme will be issued early in September. Many topics of the deepest interest to all connected in any way with hospitals and hospital administration will be dealt with, and several social problems arising out of medical charity or relating to it will form the subject of papers and discussions.

LEPERS AT THE AGRICULTURAL HALL.

A DISTINCTIVE feature of the Exhibition—"Africa and the East"—opened by the Archbishop of Canterbury, on Tuesday, June 8, at the Agricultural Hall, is "The Leper Court." Here the work of the Mission to Lepers in India and the East is illustrated by means of models of Indian and Chinese asylums, specially prepared photographs, curios, etc. The Mission is now at work in seventy-eight settlements or asylums, containing fully 8,000 lepers; and 500 untainted children are in the Homes connected with the Society. The exhibit is being arranged by Mr. John Jackson, F.R.G.S., who will also give addresses daily on the tour among the leper settlements of India, China and Japan, from which he has recently returned. Other speakers will be Mr. T. A. Bailey and Mr. C. Douglas Green.

THE late Mr. Claudius Galen Wheelhouse, F.R.C.S., D.Sc., LL.D., of Filey, Yorks, whose recent death at the age of 82 we recorded a few weeks ago, left estate valued at £18,590 gross, with net personality £17,481.

THE annual dinner of the Indian Medical Service was held on Thursday, June 10, at the Gaiety Restaurant, when General Sir O'Moore Creagh was the guest of the evening and Sir George Birdwood was in the chair.

DR. HENRY KAY RAMSDEN, of Sloane Street, Chelsea, died last week after a long illness at the age of forty-two. After studying at Owens College Dr. Ramsden obtained the M.B., Ch.B. degree at Victoria University in 1891, and held various resident and other appointments in London, Guernsey, and Queensland. He had also been a civil surgeon with the South African Field Force, and was a surgeon captain in the 6th London Rifles.

THE Army Council has approved arrangements for the training at military hospitals of the matrons on the rolls of Territorial general hospitals. Each of the latter is allowed two matrons, all liable to be called up for training for seven days in alternate years. The hospitals appointed for the training are the Royal Victoria Hospital, Netley; Queen Alexandra Military Hospital, Millbank; Cambridge Hospital, Aldershot; Connaught Hospital, Aldershot; Military Hospital, Devonport; Royal Herbert Hospital, Woolwich; Alexandra Hospital, Cosham; and Military Hospital, Colchester.

MR. H. COSMO O. BONSOR, treasurer of Guy's Hospital, in the annual report states with satisfaction that, while the existing debt was paid off in 1907, bequests to the extent of £8,617 more than made up the deficiency in ordinary income. Moreover, the current cost of the new out-patient department now in progress has been met from the fund to which an anonymous donor and the council of King Edward's Hospital Fund have already contributed the greater portion of the sum needed. The number of beds available for use has been increased from 608 to 620. The average number of in-patients was 529, and the total number 8,059. The total number of new out-patients was 132,288, with 446,662 separate attendances. The number of deaths in the hospital was 701, of which 86 were due to accidents. The income totalled £71,488 and the ordinary expenditure £65,775, the balance being placed to the credit of capital. The Re-endowment Fund, instituted in 1896, now amounts to £281,421, of which £6,003 was added last year.

THE annual meeting of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis was held on June 4 at the Tuberculosis Exhibition, which has been arranged by the association at the White-chapel Art Gallery. Lord Balfour of Burleigh, chairman of council, presided, and was supported by Sir Constantine Holman, Dr. A. Ransome, of Bournemouth, Dr. Theodore Williams, Dr. R. W. Philip, of Edinburgh, and Miss Broadbent. The chairman, in moving the adoption of the report, dwelt with approbation upon the signs which are now evident of the gradual awakening of the Government and the public to the gravity of the tuberculosis problem, and the need for co-operation between all classes in the fight against consumption. He stated that five thousand people passed the turnstiles on the opening day of the exhibition, and the whole available stock of literature had been distributed with the best possible chance of going where it could be of greatest service. A considerable proportion of the visitors obviously came with the object of learning and profiting by what they saw and heard.

THE annual festival dinner in aid of King's College Hospital, London, will be held in the Victoria Hall of the Hotel Cecil on Monday, June 21, at 7 o'clock for 7.30 p.m. precisely. The chair will be taken by Lord Northcote.

THE Right Hon. R. B. Haldane, M.P., F.R.S., Secretary of State for War, will visit University College, London, on Friday, June 18, at 4.45 p.m., for the purpose of opening the new Institute of Physiology. Academic dress will be worn.

A CONFERENCE of Charity Organisation Societies is now being held at Malvern and Worcester. The proceedings include a Reception, and papers and discussions upon topics related to the organisation, co-operation, and administration of charitable institutions.

MR. J. HAMPTON HALE presided on June 2 at the quarterly Court of the Governors of the London Hospital. The House Committee reported upon the administration of the spinal anæsthetic stove. In their opinion the shock to the patient is far less than the shock from ether or chloroform, and stoveine is far safer for anæsthetising patients with cardiac disorders. The committee view with apprehension the proposed new taxes on alcohol and rectified spirit, which it is estimated will increase the dispensary account of the hospital by £200 a year.

IN his last monthly report Dr. Collingridge, Medical Officer of Health for the City, reports upon a further series of 32 samples of milk taken at the City railway stations and submitted for examination to Dr. Klein, F.R.S., of St. Bartholomew's Hospital. Of these 15 per cent. contained an appreciable amount of dirt, 40 per cent. had pathogenic bacteria of some kind, and of these latter 12.5 per cent. produced in guinea-pigs definite tuberculosis with the typical tubercle bacilli. Only 43.7 per cent. could be classed as clean and pure. Of a number of guinea-pigs inoculated with some sediment from the samples, one died with severe inflammation of the lungs and another with extensive pseudo-tuberculosis. The percentage of tubercle-infected milk was the largest ever recorded in the City, a rise from 7.7 to 12.5. A deplorable state of affairs was revealed in the subsequent tracing of the infected samples to their farms of origin, which exemplified the gross recklessness and absolute want of precaution with which the average farmer trades in milk. Dr. Collingridge strongly condemns the practice of mixing milk from churns on the great railway termini platforms.

LIVINGSTONE COLLEGE.

COMMEMORATION DAY was celebrated at Livingstone College on May 26. Many distinguished visitors travelled to the College at Leyton to take part in the proceedings. The Master of Trinity College, Cambridge (Dr. Butler) presided, and the Principal (Dr. C. F. Harford) described the progress which has taken place since Professor Macalister's Inaugural Address fifteen years ago. He pointed out the change which has taken place in public opinion as to the necessity of medical training for missionaries, which is now generally regarded as a necessity. The President's address was followed by a speech from Professor Alexander Macalister, which paid tribute to the Principal, an old Cambridge pupil. He expressed entire confidence in the training given at the College, which enables a missionary to render simple medical aid to the natives. After an appreciative speech from Dr. M. A. Stein, the Central Asian explorer, Mr. McAdam Eccles moved a vote of thanks to the Chairman and speakers, which was seconded by Dr. Price.

AFTER June 24, 1909, the Royal Sanitary Institute and Parkes Museum will be removed to 90 Buckingham Palace Road, London, S.W.

THE annual dinner of the British Balneological and Climatological Society will be held this year on Friday, June 11, at the Piccadilly Restaurant, London, W., when the President, Dr. Ernest Solly, of Harrogate, will occupy the chair.

THE summer dinner of the West African Medical Staff will take place on Monday, June 21, at the New Gaiety Restaurant, Strand, London, W. Members of the staff who desire to be present are requested to communicate immediately with Dr. Prout, C.M.G., 78 Rodney Street, Liverpool.

CONVOCATION of the University of Oxford on Tuesday last approved unanimously two decrees accepting from Dr. Theodore Williams £2,500 to establish two scholarships in physiology, and £2,500 to establish two scholarships in human anatomy. The Vice-Chancellor proposed the decrees and expressed the gratitude of the University to Dr. Williams for his liberal benefactions.

THE Lord Mayor has received a letter from the Treasurer of St. Bartholomew's Hospital pointing out that the Governors feel very seriously the heavy burden of the rates to which the buildings used in connection with the Charity are subjected. The Governors ask whether, in the event of their promoting a Bill in Parliament for their exemption from rates, they may receive the support of the Corporation in their efforts to obtain relief.

THE administrators of the Red Cross Fund, established by the Dowager Empress Marie Feodorovna of Russia to provide prizes for inventions designed to relieve the sufferings of the wounded in time of war, are now in Paris for the purpose of deciding the subjects for the next competition in 1912. Her Majesty's gift of about £10,000 was made in 1902 on the occasion of the seventh International Red Cross Conference at St. Petersburg, and the interest is spent upon the fund's quinquennial prizes. The first prizes, three in number, of the approximate value of £600 each, were awarded in 1907 at the International Red Cross Conference in London, for inventions offering the quickest and surest methods of discovering and transporting the wounded. The second competition will take place in 1912 at the ninth International Conference to be held at Washington.

NEW APPLIANCES & THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

SYNOPTIC CHART OF CARDIAC EXAMINATION.

THIS chart, arranged by John D. Comrie, M.A., B.Sc., M.B., is intended for the use of both general practitioners and students. It consists of a cardboard sheath stamped with an outline of the chest and heart, inside of which there slides a sheet of cardboard. Upon the latter are printed the names of the various diseases that affect the heart, together with their physical signs. By the simple manipulation of two tapes, the different diseases are made to show in a space at one side of the chart, and, as each disease appears,

its various signs automatically come into place at openings corresponding to the areas of auscultation, the borders of the heart, the situation of the pulse, etc.

Fuller information regarding the symptoms and physical signs of cardiac disease are given in a twelve-page pamphlet contained in an envelope upon the back of the chart; and this pamphlet comprises in brief most of what is correctly taught regarding the physical signs of disease in the organ in question. It is hoped the chart will prove valuable to the junior student of clinical medicine in the simplification of physical signs, which at first he is apt to find very bewildering; also to the senior student preparing for examination who desires a handy and concise memoriser; as well as to the general practitioner, who often wishes for a quick method of referring to the possible meanings of a given physical sign. The chart will be published shortly by Bale, Sons, and Danielsson, Ltd.

ANSWERS TO CORRESPONDENTS.

DR. D. M. MACDONALD.—In reply to your request for the date of a paper on the use of *Liquor Colchici* for Gout, etc., we have consulted the indices of the past two volumes, and the file of recent issues in the current volume; but as we go to press we have so far failed to find any reference to the drug in question. The issue of February 15, 1908, contains Part II. of an article on "Acute Gout," which mentions the Acetic Extract of *Colchicum* but not the *Liquor*. We will inform you in the event of our discovering the desired reference.

D. E. A. (Highgate).—Your questions deal with matters of considerable general interest; but, since adequate replies to the specific point upon which you desire detailed information would occupy more space than is available in this column, we are answering your letter through the post. This, however, is a course which we cannot undertake to follow, even when (as in your case) stamps are enclosed, except under exceptional conditions.

Correspondents seeking replies to their queries would do well to add initials or a pseudonym to their signatures; since, even when a personal answer by post is especially solicited, it may be impossible or inadvisable for us to comply by means of a private letter. Readers who fail to receive an answer to their queries through the post should invariably turn to this column in the ensuing issues of *THE HOSPITAL*, in case a public or semi-public reply, following their initials, should be printed amongst answers to correspondents. These answers usually appear immediately after current letters from readers under the inclusive heading "Editor's Letter Box," except in the case of matters appropriate only to the resident medical officers, when a reply from the Editor of the section may be published under that heading.—[EDITOR *THE HOSPITAL*.]

MESSRS. J. AND A. CHURCHILL announce a new edition of "Minor Surgery and Bandaging," revised by Mr. Bilton Pollard, Surgeon to University College Hospital. The first edition of this work, by Mr. Christopher Heath, was issued forty-eight years ago. The present (fourteenth) edition has been enlarged by nearly a hundred pages, and contains many new figures and a frontispiece of a surgeon in aseptic operating costume. "An Atlas of Dental Extractions, with Notes on the Causes and Relief of Dental Pain," by Mr. C. E. Wallis, Assistant Dental Surgeon, King's College Hospital, is also announced by these publishers. The text will be supplemented with a series of illustrative plates.

NURSING ADMINISTRATION.

THE DISTRICT NURSE'S TRAINING.

THE advocates of thorough training for district nurses had a hard battle to fight before they got their principles universally accepted. That the poor should have a lower class of nurse to the rich was never argued in crude form. But for a long time it was believed that the nurse who went in and out of the homes of the poor was unlikely to need the degree of skill demanded of her colleague in the sick-room, and might therefore assume her responsible duties without long preparation. The more far-sighted pioneers, among whose names that of Mrs. Dacre Craven deserves to be remembered, never wavered in the effort to make the public understand that the district nurse, liable continually to be thrown on her own resources, needs more rather than less training in comparison with the woman who works under the doctor's immediate supervision. The fixed period of training for district nurses rose from one year to two, and at last settled into the normal three years found necessary to ensure thorough competency in nurses of every description. Then came the discovery that three years' hospital training, although sufficient to impart a knowledge of nursing, does not fit a woman to enter at once upon district duties, and an additional six months spent in learning the details of district work in the homes of the poor is now considered essential.

It is undoubtedly a very important principle, in days when nurses drift from one branch of work to another at intervals of a few years, that the training of district nurses should in all essential particulars be identical with that of private nurses. The benevolent people who are always on the watch to persuade promising probationers to get a few months' training somewhere, in order to qualify for appointments at small wage, entirely forget the natural tendency of such imperfectly trained nurses to press forward and better themselves, not by adding to their qualifications, but by assuming duties for which they have never been prepared. Experience shows that few even of the nurses elaborately trained for the work of the district remain more than a few years in this groove, and that those who receive the minimum training through subsidies subscribed by village associations seldom continue village nurses after the termination of their original agreement. Whether they have received four years' or four months' training, the result is the same. They try some other kind of work—for a while, at any rate—often returning to district work when they have tasted variety.

Hence danger is incurred by bestowing a few months' training on uneducated women, and conferring on them the status of a nurse, while later on, supplied with a good testimonial, they are introduced to a sphere for which they are in no way fitted. So long as the district nurse is trained under precisely similar conditions to private nurses it matters little whether she varies her work, and in view of the fact that district work proves in the majority of cases only a temporary occupation, it is of the utmost importance that she shall not be trained exclusively with a view to this one kind of work.

It is unfortunate that hospital training can never suffice to fit women for district work without some supplementary experience. It discourages nurses from taking up district work to find that they are still probationers after they have received their certificates, and it is a heavy charge on charitable funds to be compelled to subsidise them while in the transition stage. At Guy's Hospital the selected nurses get an opportunity of taking a midwifery course, which lasts three months, and includes work in connection with the district nurses among the homes of the poor.

This is the ideal, but very few hospitals are able to offer their nurses this kind of experience. The nurse who takes up district work when launched out of the ward into a region wherein the merest necessities are wanting is completely at a loss unless she is placed for a few months under the guidance of a superintendent who can minimise her difficulties and show her how a high standard of nursing can be maintained in the teeth of every obstacle. More training centres for this purpose are among the crying needs of the day. Not nearly all the available material is being used, and considering the high quality of the probationers who take up the work already fully qualified in other particulars, it ought not to be difficult to get them accepted as subordinate helpers in many parishes where now one fully qualified nurse is struggling single-handed with a condition of chronic overwork. No training is better than what can be imparted by a good teacher to one pupil working in close association with her. But it needs supplementing. Speakers at the recent Congress made a powerful plea for introducing some study of social conditions into the training of the district nurse.

District nursing is apt to narrow the intellect while developing the sympathies, because it is largely taken up with the performance of mechanical things not obviously related to the larger issues of life. The nurse's outlook becomes widened indefinitely when she obtains an insight into the trend of her daily small duties and perceives in what manner she is constituting a social force with far-reaching consequences for the race. She cannot know too much about the aims of the educationalist and of the sanitary expert, of the best traditions of charity and of the best aspirations of the new municipal reformers. She needs practical information about what is being done for the poor in her district, and how best to obtain for them benefits freely offered but often ignored. The vital need in the training of the district nurse is for some deeper instruction in the meaning of what she is attempting, so that she may be cheered with a sense of the value of her work. We are trying to get the best kind of nurses for this kind of work, and are succeeding only partially in retaining their services because nurses get tired of the day of small things. Are we, perhaps, training the fingers at the expense of the mind, and ought not the district nurse in continuation of thoroughly efficient training to be drawn more decidedly into the current of modern social movements?

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, JUNE 14 to JUNE 19.

ROYAL SOCIETY OF MEDICINE, 20 Hanover Square, W.

At 5 p.m.

June 17, **Dermatological Section.**

Dr. Wilfrid Fox and Dr. Rolleston: "A case of leukæmic infiltration of the skin." And other cases.

June 18, **Section for the Study of Disease in Children.**

PROVINCIAL MEETING AT EDINBURGH.

At 2.30 p.m.

Demonstration of cases and specimens at the Edinburgh Royal Hospital for Sick Children.

At 5 p.m.

Meeting in the Lecture Theatre of the Children's Hospital. Papers will be read.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 5.15 p.m.

June 14, Mr. Lockhart Mummery, **The Diagnosis of Diseases of the Rectum and Anus.**

June 15, Dr. W. H. H. Tate, **Climacteric Hæmorrhage.**

June 16, Mr. Clinton Dent, **Recent Experiences with the Schaifer Method of Artificial Respiration.**

June 17, Mr. Edred Corner, **Affections of the Umbilicus.**

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

June 14 and 17, **Surgical Registrar, Demonstration.**

June 18, **Medical Registrar, Demonstration.**

At 12 noon.

June 14, **Pathologist, Pathological Demonstration.**

At 12.15 p.m.

June 15 **Dr. Pritchard, Practical Medicine.**

June 16 and 19, **Dr. Grainger Stewart, Practical Medicine.**

At 5 p.m.

June 14, Mr. Bidwell, **Practical Surgery.**

June 15, Dr. Seymour Taylor, **Aortic Obstruction.**

June 16, Dr. Beddard, **Medicine—IV.**

June 17, Mr. Edwards, **Clinical Lecture.**

June 18, Mr. Harman, **"Pink Eye."**

THE THROAT HOSPITAL, Golden Square, W.

At 5.30 p.m.

June 14, Dr. Bond, **Acute and Chronic Inflammation of the Mastoid.**

June 17, Mr. Rose, **Intra-Cranial Complications: Symptoms and Diagnosis.**

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

June 15, Dr. G. G. Macdonald, **The Pathology of Cardiac Inflammations.**

June 17, Dr. F. H. Wallace, **Methods of Producing Local Anæsthesia.**

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich, S.E.

At 3.15 p.m.

June 15, Mr. Carless, **Fractures about the Ankle.**

At 5.30 p.m.

June 16, Mr. Cargill, **Glaucoma: Diagnosis and Treatment.**

At 2.15 p.m.

June 18, Dr. R. Bradford, **Some Varieties of Anæmia.**

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

June 15, Sir W. Gowers, **Tremor.**

June 18, Sir Victor Horsley, **Surgery of the Nervous System.**

LITERARY NOTES.

THE NATIONAL FOOD REFORM ASSOCIATION, whose temporary address is 40 Chandos Street, Charing Cross, London, have just published two booklets. The first, by the Chairman, the Hon. Neville Lytton, deals with the need for food reform at the present day and the aims of the Association; while the second, entitled "Hints towards Diet Reform," with 24 simple recipes, will be found most useful by all who desire to introduce greater variety into their menus. Specimen copies will be sent post free by the Secretary on the receipt of three stamps.

MESSRS. JOHN BALE, SONS AND DANIELSSON, LTD., are publishing a translation of the second edition of Bandelier and Roepke's "Lehrbuch der spezifischen Diagnostik und Therapie der Tuberkulose" under the title of "Tuberculin in Diagnosis and Treatment." The first section (eighty pages) deals with the subcutaneous tuberculin test and the local tests associated with the names of Calmette and v. Pirquet, discussing their significance in diagnosis. The second section (seventy-five pages) describes the treatment of pulmonary tuberculosis with tuberculin, giving the exact mode of employment of the different preparations. The third section (twelve pages) summarises the tuberculin treatment of other organs. A coloured plate of the local tests is given, and eighteen charts illustrating the tuberculin reaction and the course of tuberculin treatment.

ALL concerned in the physical conditions and education of the children of the poor will be interested in a new work by A. D. Edwards, M.B., B.S., B.Sc., D.P.H., Medical Officer of Schools for Bournemouth, entitled "Children of Poor." The book deals with such subjects as "Child-Life in the Slums," "Underfed and Overworked Children," "Pain and Suffering in Childhood," "Childhood in the Workhouse," "Open-air Schools," "The Children Act of 1908," etc., and is an indictment of the unsatisfactory conditions under which poor children are reared and educated, and of the avoidable unhappiness and pain which they suffer. Remedial measures are fully dealt with. The publishers are Hammond, Hammond and Company, 12 Paternoster Row, E.C.

ACTING in pursuance of a resolution passed at the last International Tuberculosis Conference, the International Anti-Tuberculosis Association have sent out from their office in Berlinerstrasse, Charlottenburg, an inquiry sheet relating to the details of expenditure in sanatoriums and kindred institutions. The questions, although not expressed in very idiomatic English (the word "surrogate" used in connection with butter suggests a good many things sooner than margarine, for instance), are comprehensive and practical, and, if well answered, should certainly put the committee appointed to deal with this matter in possession of some valuable information. There can be no doubt that any measure, however slight, of central control is likely to benefit sanatoriums just as much as hospitals. It may be noted that the schedule, while inquiring as to means of support, makes no specific mention of work done by patients.

THE HOSPITAL

JUNE 12, 1909.

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The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 121, VOL. V. [No. 1193, VOL. XLVI.]

SATURDAY, JUNE 19, 1909.

THE POPULAR TREATMENT OF MEDICAL SUBJECTS.

THERE is a confirmed prejudice among medical men against the book which deals popularly with matters medical: a prejudice which is generic, impersonal, and may be looked for quite apart from the particular subject under notice or the man who has dealt with it. That such a fundamental bias should exist is not surprising, because the pseudo-medical brochure is a favourite resource of those who are anxious to exploit proprietary panaceas from purely commercial motives, and this business has reached so unconscionable a pitch that any one, no matter how irreproachable his professional standing, who appears to be dallying ever so remotely with public curiosity, stands in danger of sharing the condemnation of the advertising vendor of cure-alls. Nevertheless, the subject of admitting the public into our professional confidence is not one to be dogmatically dismissed, for there is much to be said on both sides, and the problem is worthy of consideration.

These reflections are prompted by a perusal of the latest addition to the new Library of Medicine, a book upon Drugs and the Drug Habit* from the pen of Dr. Harrington Sainsbury. The series to which the volume belongs is planned, we are told, upon the assumption that there are certain medical matters of the very gravest importance, which urgently claim the attention and appreciation not only of the medical man, but also of the intelligent layman. With this end in view the editor has concerned himself to select for his authors men of good professional standing, and for his subjects those matters of health which cannot be efficiently handled without the intelligent co-operation of the public.

Now every one will admit that these are laudable aims. There are many problems encountered by medical men, the satisfactory solution of which awaits the education of the public. Such, for example, are the prevention of consumption, the reduction of infantile mortality, and the bearing of heredity upon the race, all of which subjects are included in the series. In these matters the justification of the work lies upon the surface. It is common knowledge among the educated, and is becoming

common knowledge even among the labouring class, that consumption is an infective malady propagated under well-ascertained conditions, that infantile mortality is for the most part preventable by the exercise of simple precautions, and that certain sins of fathers, and a good many of their physical disabilities, are liable to be visited upon their children. But no literature can be considered superfluous or to be deprecated which endeavours to drive home or disseminate these vital facts. Here it may be truly said that the prime function of the physician is an educative one, and that his success is to be measured by the efficiency of the education he imparts. But the mischief is that even in such cases as these, when the urgency of public co-operation with the profession is past dispute, one cannot but feel that the lessons inculcated in these volumes will not reach those who are most in need of them. For a man sufficiently intellectual to undertake the perusal of the New Library of Medicine has probably already gleaned the necessary knowledge in the course of his daily life. His infants will not die at the age of four months in consequence of being fed upon potatoes and bacon or cheese, nor will his consumptive relatives remain an unrestricted menace to the health of their families. No. While one may applaud the purpose of such volumes and admit that their propriety is not debatable, it is hard to escape the conclusion that their practical value is likely to be disappointing. Unhappily, there seems to be no short cut to the education of those who most require it. To be achieved successfully it must be achieved laboriously, by oral demonstration and personally applied persuasion.

Turning now to the particular volume which forms the text of these remarks, one meets an entirely distinct phase of the question. How, it may be asked, is a disquisition upon the rationale of drug-treatment likely to benefit the layman? The answer is that a reasonable appreciation of the principles underlying the administration of drugs will tend to correct two extreme positions commonly assumed by different sections of the public. On the one hand, we have the confirmed sceptics who regard all medicaments as items of professional humbug; on the other, the confiding section so convinced of the virtues of the

* *Drugs and the Drug Habit.* By Harrington Sainsbury. (London: Methuen. 1909. Pp. 297.)

pharmacopœia that they are ready to expect miracles from it, and lose no opportunity of sampling its merits. If it were possible to persuade both these sections that there is a rationale underlying the administration of medicines, and that many of our drugs are potent and worthy servants (although the days of miracles are over), the relation of patient to physician would be decidedly smoothed, to the advantage of both. It will be seen that the claims of such a volume as this, considered purely on the score of its subject matter, stand on a lower plane than those of the other books mentioned above: on a lower plane, that is to say, of public utility, for in all other respects it is an excellent example of what a popular book on a medical subject should be. It is scholarly, thoughtful, pleasantly written, and altogether most readable. Although it deals with a variety of drug habits, there is nothing lurid or sensational in the treatment of the subject. It exhibits, in short, the good taste to be expected from the pen that wrote it. What, then, is there to grumble at? This. It is

said that by a certain age every man is either a fool or a physician. The tag would be truer if it asserted that every man is a fool who thinks himself a physician, though he is, in fact, something else. For the superficial knowledge accumulated by a layman upon such a subject as medicine is peculiarly liable to engender distorted views, and to produce a being who, though never so apt at his own proper task, does harm both to himself and his intellectual reputation by the practice and preaching of his ill-digested learning.

It is hardly necessary to refer to the class of book which would seem to have for its motto "every man his own doctor," for we take it that there cannot be two opinions about the perniciousness of such publications. Every author who contributes to such a series as the New Library of Medicine must be conscious of the risks which await the task. Dr. Sainsbury has taken adequate pains to avoid them; but some of his fellows have, in our judgment, gone unwisely close to presenting a text-book of medicine for public perusal.

THE TYPHOID CARRIER PROBLEM.

A GREAT deal of attention has been attracted in recent months to the occurrence of latent typhoid bacillosis in apparently healthy persons who may, months or years previously, have suffered from typhoid fever. It has been proved that in a certain proportion of such individuals the intestines, fœces, gall-bladder, and so on, may continue to harbour such bacilli still capable of virulence if introduced into the alimentary tract of a susceptible person, although they do not seem to occasion any inconvenience to their actual host. Researches into these "carrier" cases and into the methods of detecting them have been carried out especially by officers of the Army in India; but it is quite evident that the typhoid-carrier may menace the public health in temperate as well as tropical zones, for typhoid fever is everywhere endemic. The mere fact that we have, as we believe, closed so many gates against the typhoid bacillus makes it the more important to secure also any newly-discovered breaches in our defences. The treatment, therefore, of the typhoid-carrier with a view to his disencumbrance of his dangerous guests is a matter of considerable importance, and until some system which will secure this is devised the most that can be done is to prevent the dissemination of such bacilli as actually escape from him. With this end in view the Medical Officer of Health for Bristol, Dr. D. S. Davies, has printed and issued a sheet of instructions to be handed to all typhoid convalescents when discharged from hospital, in which certain recommendations as to precautions to be observed are indicated for their guidance. To drive home the necessity of carrying out these precautions the sheet

is prefaced by a little elementary bacteriology, and if this has the desired result of convincing the public that the advice given is based on a real knowledge of epidemic diseases and is not one more of the medical fads of which they are so suspicious, the results may be excellent. A good point is made in the paragraph which deals with certain occupations in which the handling of materials afterwards swallowed as food is prominent, such as the confectionery, bakery, and sweetmeat trades, for example.

It is too much to hope for as yet that any very considerable percentage of typhoid convalescents will take any notice of these counsels of perfection, which enjoin, amongst other things, the washing of the hands after every act of defæcation or micturition, and periodical visits to a bacteriologist for examination of the blood, excreta, etc., for the typhoid bacillus; nor, we imagine, is Dr. Davies very sanguine of immediate success in these respects. Still, glimmerings of hygiene and its bearing upon the social and economic problems of the day are slowly penetrating the general population, and the day may be less distant than is supposed when civilised society shall be educated up to appreciate its medical officers of health and to heed their simplest as well as their most elaborate warnings. On the other hand, it must not be lost sight of that the vast majority of typhoid outbreaks are definitely traceable to pollution of water, milk, and other substances derived from sources with which typhoid "carriers" have no connection. That is to say, the "carrier" factor in the promotion of epidemics in Britain must be very slight compared with that of neglect of the ordinary principles of sanitation.

ANNOTATIONS.

The Tuberculosis Exhibition.

THE National Association for the Prevention of Tuberculosis and other Forms of Consumption is to be congratulated on the very sound and practical way in which its scheme of a Tuberculosis Exhibition in Whitechapel has been carried out. For once the reality of some of the factors concerned in the propagation of tuberculosis seems to have been so presented that it impressed the gentlemen of the Press as well as the general public. Indeed, so well have the management advertised their exhibition that its success, were it in the West End, would be assured. The selection of the East End for this educative exhibition, which was opened by Mr. Burns at the Art Gallery in High Street, Whitechapel, is, of course, due to the desire to get in touch with the people who are themselves familiarised by long usage with the unwholesome conditions of life which predispose to tuberculosis; to teach them, if possible, a new way of life, to adapt a phrase of which a good deal has lately been heard. We cannot be so sanguine as to suppose that more than a minute proportion of those whom it is desired to reach will visit the Exhibition, or that many of those who do go will be convinced by what they are shown; but that need not prevent a generous recognition of the Society's objects and labours, which are alike excellent. It is announced that on the conclusion of the Exhibition at Whitechapel it shall make an extended tour of the provinces and of other poor districts of London. No better suggestion could be made, and it is to be hoped that great interest will everywhere be aroused. As a matter of fact, there would be no harm, but perhaps great benefit, in establishing the exhibition for a short time in the West End, for all classes are sadly in need of education in the tuberculosis problem.

Sanitation in the West Indies.

It will be remembered that Major Ronald Ross has lately expressed profound dissatisfaction with the anti-mosquito and other sanitary crusades in certain of our tropical dependencies which he has visited; and the suggestion was made in these pages (on page 224 of our issue of May 29, 1909) that possibly the distinguished investigator's strictures were but partially deserved. Major Ross singled out Jamaica amongst other colonies in which tropical hygiene is especially backward, an island so near both Panama and Cuba that the example of what American industry can accomplish in those regions renders any slackness particularly unpardonable. It would seem, however, that among the Antilles matters are not nearly so bad. Sir Rubert Boyce writes to the *Times* of June 3 an appreciation of the awakening of the West Indians to the imperative necessity of ridding their islands of mosquito-borne diseases. The education of the rising generation in preventive hygiene is being carefully looked to, and the churches, of all creeds, are co-operating heartily. It is now in many of our islands a punishable offence to harbour mosquito larvæ on the premises, and 99 summonses have been issued in Barbados alone in the last two months. In fact, Sir Rubert's

impressions are favourable all round, and he is convinced that our West Indian possessions have an immense future if the forward progress made towards security of health can be carried out to its proper conclusion. He does not specify Jamaica by name, but it is scarcely to be supposed that he would fail to visit this, the largest and most important of our possessions in those seas. Trinidad, Barbados, St. Lucia, and Antigua seem to be doing best in this matter; but surely Jamaica cannot long lag behind. Between the optimism of Sir Rubert and the pessimism of Major Ross it is perhaps safe to strike a balance.

Literature and Journalism.

ONE conclusion arising out of the recent discussion at the Imperial Conference of Editors on the relation of literature to journalism was to the effect that the former might be found even in the columns of a periodical, and is often wanting in matter presented in octavo form. From the nature of the case the verdict may have been biased: we realise fully that the same objection applies to the present remarks, the sense of which is that in this particular respect medical and lay journalism are precisely comparable. It will, however, be granted that, as regards our leading medical contemporaries in this country, there is a great gulf fixed between the standards of the editorial contributions and of most of the signed articles and papers. English medical journalism ranks high; English medical literature, as a whole, lacks the authority of German, and the lucid expression of French, work. It is not easy to indicate practicable measures for improving matters in the absence of a general raising of the standard of research, and some elevation of the standard of preliminary education demanded of would-be students of medicine. Whilst there can be no possible objection to the former line of progress, any suggestion for increasing the range or severity of the minimum tests of general and academic knowledge which guard the portals of medicine, would arouse considerable opposition from certain practical matter-of-fact persons who hold that a doctor's business is to treat sick people and not to talk cleverly or write cultured English. It is not always the crude efforts of beginners, perhaps passed for publication on the lenient principle of allowing "the first bite," which vitiate records of medical progress. Maiden essays should, and do, receive the reverence due to youth; and anyone can be in the position to quote a paper or two after his name in the *Medical Directory*, a work which, as recently pointed out in these columns, is largely made up of self-advertisement on the part of its many contributors. There are, unfortunately, seniors who pursue some fashionable line of investigation to the point at which real difficulty is encountered, a point at which scores before them have arrived. Advantage might possibly result from making it compulsory for certain candidates to literary and professional fame to read the full modern literature of some very small subject. Familiarity with notable previous studies should have the same quieting influence as a look through the files at the Patent Office has on an over-confident inventor:

MEDICAL OPINION AND MOVEMENT.

THE discovery of the Specific Organism of Syphilis has led to considerable research in regard to the relation between this disease and still-birth. Dr. Gräfenburg, examining 50 macerated stillborn fœtuses, found the treponemes in 39, that is in 78 per cent., and he points out that this may be taken as a minimum, as a negative result is not conclusive against the presence of the disease. In 44 confinements of syphilitic patients, maceration of the fœtus occurred 38 times, that is a proportion of 84 per cent. So that one may conclude that maceration of the fœtus is a strong indication of the presence of syphilis. In only three cases the infants went to full term, but the author has never found the treponemes in the fœtus before the thirteenth week. Colles' law appears to hold good in the light of these researches. Only a few of the mothers showed any sign of the disease, and on the other hand in two cases of pronounced syphilitic lesions in the mother examination of the infants failed to discover the specific organism. The treponemes are seldom found in the placenta, but in the cord, in the walls of the bloodvessels close to the umbilicus. The author gives details for the search for treponemes at this site, and considers that confirmation of their presence in this way may be of considerable value in cases where the diagnosis is doubtful.

AT a meeting of the Académie des Sciences Monsieur Devaux reports some interesting observations upon the relation between Sleep and the Retention of Fluid in the Tissues. He suggests that every organ in a state of active function increases its osmotic power and that the œdema and thirst of fatigue are due to this osmotic attraction of fluid to the tissue in activity. Histological changes in experimental insomnia point to a relation between fatigue and the need of sleep and retention of fluid in the tissues. In further support of this idea the author recalls the swelling of the eyelids and face in consequence of a heavy and prolonged sleep. He has put the question to experimental test in the following manner: A light weight is placed upon the forearm, and the duration of the impression is noted and compared when the subject is awake and asleep. With 25 subjects experimented upon in this way the mean persistence of the impression during sleep was 4 minutes 18 seconds, and in the waking state 2 minutes 38 seconds. From these observations Monsieur Devaux concludes that the œdema of sleep is not confined to the face, but is a general œdema of the tissues, and that even light sleep is accompanied by an interstitial retention of fluid of the whole organism, and he thinks that this would especially apply to the brain.

SUCCESSFUL as the operation of Gastro-enterostomy has proved to be in a number of morbid conditions of the stomach, digestive disturbances are not an infrequent consequence of this form of surgical interference. Dr. S. Jonas has endeavoured to discover the cause for these troubles by means of

radioscopic examination after a test meal with bismuth. He finds that in cases in which the operation is completely successful, and there are no disturbances of digestion, the food leaves the stomach by the orifice of the gastro-enterostomy immediately, and that the stomach does not retain the food at all. On the other hand, when the patient experiences pain some time after a meal, the food remains for a variable length of time in the stomach. This may be due to a narrowing of the intestinal orifice or to the position of the orifice in the wall of the stomach. On entering the stomach the food naturally falls to the lowest part of the greater curvature, and if the orifice is there it can pass out at once, but according to the author the intestinal orifice is very often higher up, and the food is only evacuated by a change in position of the patient, or after excessive peristalsis of the stomach wall, which gives rise to pain. Moreover, this stasis of the food causes a local dilatation which increases the trouble. The practical moral, therefore, of this examination is to make the orifice of the gastro-enterostomy as low as possible in the stomach wall. In cases in which this is impossible the author thinks the tendency to dilatation and the formation of a *cul de sac* may be controlled by an abdominal belt and by massage, and he also suggests that by means of the x-rays the position of the body might be ascertained in which the stomach contents are most easily evacuated through the intestinal orifice.

PROPOS of the use of Bismuth Salts for the Radioscopic Examination of the Digestive Tract, several cases of bismuth poisoning have been reported recently as a consequence of their administration in large quantities for this purpose. The chief features of the condition are a severe stomatitis with the formation of a false membrane on the lips, tonsils, etc., salivation, nausea, dysphagia, vomiting, meteorism, and diarrhoea. There is also a blackish coloration of the tissues, especially of the tongue, lips, tonsils, gums, and the rest of the alimentary tract. Rarely this coloration extends to the skin of the trunk and limbs. There is diminution of urine excreted, and there may be nephritis with albuminuria and casts. Cardiac and cerebral troubles may also occur. It has been suggested that the toxicity is due to the nitrate by conversion in the body into nitrite, but Dr. Lewin points out in the *Münchener Medizinische Wochenschrift* that the characteristic toxic action of nitrites is the formation of methæmoglobin, which, according to this author, cannot be obtained by the administration of bismuth subnitrate. He is of opinion, therefore, that the toxicity is entirely due to the bismuth. As a substitute for bismuth he proposes ferroso-ferric oxide (magnetic oxide of iron). It is not toxic and is impermeable to the x-rays to the same extent as bismuth. In fine powder it can be mixed with certain kinds of food, such as potato purée in the proportion of 30 per cent. or more. Experiments with animals have shown that it is especially useful in the study of intestinal peristalsis.

METASTASES in Gastric Carcinoma, as is well known, occur not rarely in situations where they may easily be missed unless systematically searched for, as, for example, in the supra-clavicular glands. A new site for early secondary deposits in the subjects of this disease is described in the *Albany Medical Annals* by Dr. Blumer, under the name of the rectal shelf. This is the vesico-rectal fold, wherein a metastatic growth can fairly often be found beyond the prostate in a certain proportion of cases, even when the primary disease is fairly early. The mass is described as feeling like a shelf projecting into the rectal cavity, carrying the rectal wall before it; the tumour is often of cartilaginous hardness, may or may not encircle the bowel as a primary rectal carcinoma does, but does not ulcerate the mucosa, and therefore does not cause the passage of blood or pus. Sometimes the mass is a little higher up, well beyond the prostate, and only just palpable by the examining finger. In dealing with gastric carcinoma the existence of metastases is a point which very materially affects the operative procedures and even the diagnosis itself; and if these observations are confirmed it will evidently become the duty of surgeons to examine the rectum as a routine before exploring the abdomen in a suspected case of gastric carcinoma.

THE exact effect of Ether and Chloroform upon the Kidneys and their functions is a matter which does not seem yet to be finally decided. Some physiologists believe that both drugs, but especially ether, cause temporary albuminuria and the passage of casts in a majority of patients. Others say that chloroform is the more liable to initiate albuminuria than is ether, but less likely to aggravate existing lesions and to set up suppression or hæmaturia. It has also been noticed that in delayed chloroform poisoning the kidneys show fatty degeneration. Again, operations on the kidneys are often attended by considerable shock, for which reason ether has been advocated against chloroform; and the constrained lateral position, in which respiration must necessarily be a little interfered with, has been adduced in the same sense. In cystoscopy when the ureteric orifices are to be examined it has been said that chloroform is preferable, as it does not check the secretion of urine in the way ether does. Some of these points have been reinvestigated by Dr. J. W. Bovée, who read a paper recently before the American Gynæcological Society. He finds that both ether and chloroform reduce the secretion of urine, and that this effect is greater in the case of chloroform; under the latter the proportion of urea remains normal, whereas under ether it is diminished. Also that neither anæsthetic has any constant or appreciable effect in producing casts or albuminuria.

THE Value of Percussion as an aid to the Diagnosis of Fractures of the Skull is highly esteemed by Mr. J. H. Pringle, who narrates in the *Edinburgh Medical Journal* three cases in which he was able to localise by this means intra-cranial hæmorrhage under a fracture. In examining the

skull in this way it is advisable to make sure that the mouth is either shut or open throughout the percussion, as otherwise slight modifications may be introduced; it is also necessary to remember that any considerable œdema or hæmatoma must be discounted. The notes elicited by immediate percussion with the finger, preferably, but not necessarily, on the shaved scalp, are compared: (1) along the sagittal suture of the two sides, (2) over the parietal and occipital bones, and (3) very especially over each temporal fossa. When a fracture exists in the neighbourhood of these areas, the note is often lowered in pitch over the fracture zone, and in addition to this a definite crackpot quality is introduced in many cases. The latter is particularly to be observed when there is comminution, but also not uncommonly over the salient of an angular fracture. For either sign it is probably necessary that a fracture or fissure should extend a certain distance over the surface of the skull, and in fractures which are purely basal the alteration of the percussion note is not to be found at all. Some patients, in whom no alteration in the percussion note could be obtained over a suspected fracture, complained of pain always elicited in one place or one area. Mr. Pringle is inclined to regard this as an indication of fracture because in other patients the same complaint was produced, after recovery of consciousness, on percussing exactly those places where dulness or cracked pot sounds had been obtained whilst insensible. This sign, however, he regards as of less value than the other.

THE Abdominal Reflex as a diagnostic and also as a prognostic sign in Typhoid Fever was studied in the first instance by Dr. J. D. Rolleston. The main conclusions that he drew from his observations were as follows: That the abdominal reflex is affected in a very large number of cases of enteric fever, the percentage of cases in which it is entirely lost exceeding those in which its normal activity is only diminished. From its absence under the age of fifty being confined to certain nervous diseases and acute abdominal conditions, notably appendicitis and enteric fever, the absence of the abdominal reflex in a given case of continued pyrexia in any patient below fifty is of considerable value. The comparatively transient nature of the affection of the abdominal reflex in enteric fever is a striking contrast to the more chronic affection of the knee and ankle-joints in diseases associated with peripheral neuritis, e.g. diphtheria. Return of a lost reflex, and, *a fortiori*, resumption of its normal activity, are valuable indications of commencing convalescence, and often correspond with lysis and characteristic changes in the fæces and urine. The objective sign of return of the reflex is often associated with the return of the subjective feeling of ticklishness normal to the individual. In reappearance of pyrexia in convalescence, the condition of the abdominal reflex is a valuable index of the nature of the pyrexia. That is to say, its disappearance or its becoming sluggish would point to a relapse. No constant relation exists between the condition of the abdominal reflex and that of the tendon reflexes.

AT a recent meeting of the Société Médicale des Hôpitaux, Lermoyez and Aubertin drew attention to the dangers which may result from unrestricted use of Adrenaline, a drug which is so often used by patients in various nasal sprays, douches, etc., without any supervision by the medical attendant. The author's experiments were carried out on rabbits. A number of these animals were subjected to a long course of nasal sprayings. In no case were the authors able to find subsequent atheroma of the vessels; but in some of the animals distinct evidences were found of cardiac hypertrophy and hyperplasia of the suprarenal bodies. In one case death resulted from acute cedema of the lung. Although these results are sketchy and inconclusive, they may attract further attention to the need for caution in the indiscriminate and unrestricted prescribing of potent animal sera and extracts; and to the desirability of constant clinical and laboratory research into the side-issues and remote possibilities of serum-therapy and organo-therapy.

FABRE and Roubier, in the *Lyon Médicale*, publish a study of Syphilitic Sciatica. In the author's opinion this condition is most frequently met with as a tertiary phenomenon, but may occur and be overlooked in the secondary stage. When occurring in the latter stage it is most frequently partial, and limited to a segment of the nerve, e.g. to that which supplies the buttock. The course is capricious, and unaccountable remissions and exacerbations, with nocturnal paroxysms of pain, are common. The condition quickly yields to antispecific treatment. When occurring in the tertiary stage it presents the ordinary symptoms of sciatica, with intense persistent pain along the whole course of the nerve. There has recently been a tendency to recognise two types of sciatica, namely, that of the nerve-trunk proper, and that of the nerve roots. Diagnosis between these two forms is by no means easy. Some authorities lay stress on the pain caused in the nerve by coughing and sneezing, which they regard as proof that the trouble is in the nerve roots. This sign is, however, not pathognomonic. Much more trustworthy is the presence of bands of hyperæsthesia or anæsthesia following the distribution of the affected nerve roots. In order of frequency the nerves affected are the fifth lumbar, first sacral, second sacral, fourth sacral, and, lastly, the third sacral.

THE results of the first year's work of the special ophthalmic ward in St. Paul's Hospital, Liverpool, are summarised in the *Ophthalmoscope* by Mr. Nimmo Walker, to whom the conception and initiation of the scheme are due. The foundation from which everything is built up is the enforcement of notification of ophthalmia neonatorum by the Health Authority of the City, which suspends or reports to the Central Midwives Board those who neglect this duty. By this means early information is obtained in the great majority of cases, and whenever possible both mother and child are admitted as in-patients to the special ward for the purpose, unless the parents can afford to employ a private practitioner. After eighteen months' trial Mr.

Walker commits himself to several definite statements. Experience shows that the theoretical objection of possible injury to the mothers by being moved so soon after parturition is not borne out in practice. Next the superiority of this in-patient treatment over out-patient methods is proved by results. Thirdly, the duration of disease varies directly, and the chance of complete recovery inversely with the length of time between the onset of the disease and the admission to hospital. The tabulated statement of the cases proves how valuable this work is, and the municipal authorities of Liverpool are to be congratulated upon the success of their co-operation with a charitable institution.

THE following remarkable case illustrates the fact that dentists should invariably be most careful in the Disinfection of their Instruments, preferably by boiling. It also illustrates the unexpected ways in which a chancre may be caused. The full description will be found in the *Bulletin du Syndicat des Chirugiens Dentistes*. The gist of the case is as follows: A medical man was consulted by a youth 12 years of age, who complained of a swelling of his nose. The first impression was that the lesion was an abscess, but later it turned out to be an undoubted hard chancre of the naso-labial sulcus with surrounding induration. Upon careful inquiry it was ascertained that the lad was a mechanician apprenticed to a dentist. He had, in common, apparently, with many other mechanics, acquired the deplorable habit of finishing off the polish on his instruments by rubbing them upon the side of his nose. By an unlucky chance one of the dentist's patients was actively syphilitic. Simple contact with the patient's buccal mucosa and secretions when the secondary eruption was fully out had infected the tools, and one of these had in turn led to transmission of the infection to the unlucky lad.

THE results of some experiments by Van Bogaert with Serum-therapy in the treatment of Nephritis are published in *La Province Médicale*. The serum used was that of Teissier, which is derived from the renal vein of the goat. In all, nine cases were treated by subcutaneous injection. The first case was that of an acute nephritis with uræmic cerebral symptoms and eclampsia. The effect of the injections was the rapid amelioration of all symptoms caused by the renal insufficiency, though the scarlatinal symptoms, such as otitis, enlargement of the glands, arthritis, etc., were scarcely influenced. Equally good results were obtained in the second case, one of chronic nephritis in a tuberculous subject; the patient before the serum was at the onset of uræmia, and is now in a condition of renal sufficiency, the nephritis, however, persisting. The third case, in which the symptoms were mainly of cardiac origin, died of heart failure on the eighth day. In the next two cases the nephritis was respectively gouty and scarlatinal, and marked benefit followed the injections. The remaining trials were for the most part unsuccessful, but they were upon cases of extreme gravity.

HOSPITAL CLINICS.

PROGNOSIS IN PULMONARY TUBERCULOSIS.

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WITH the advance in our knowledge of the pathology of tuberculous processes and more rational methods in the treatment of consumptives, the questions to be answered in giving a prognosis in pulmonary tuberculosis involve much more than an estimate of the time within which a fatal termination may be expected to occur.

Within the memory of many of us the certainty of a fatal result of the disease was taken for granted; all that was asked was "How long do you think the patient will last?" Fortunately, we have learned that tuberculosis, even when it attacks the lungs, is a disease which is often arrested, and that complete recovery is by no means uncommon. The records of autopsies on persons dying from diseases other than tuberculosis have shown how large a proportion of the people in this country become affected and recover with nothing beyond a scar in the lung to mark the old seat of the disease, and clinical experience provides full endorsement of the deductions from pathological evidence. Not only do we sometimes meet with evidences in the lungs of healthy persons of scars—and perhaps on inquiry learn of a period of indefinite ill-health extending over many months which has almost been forgotten—but we may watch the consumptive recovering under our eyes, and test the permanency of the cure by following the record of years of healthy useful life in the former patient.

A fresh question has now assumed primary importance in the prognosis of consumption—namely, what are the patient's chances of recovery? The matter of prognosis in pulmonary tuberculosis has become one of considerable complexity involving many considerations; it includes not merely a forecast of the ultimate result—the probability of recovery—but an estimate of the probable duration of the illness, whether the result be favourable or otherwise. If we may hope for arrest of the disease, will recovery be complete, allowing active work and the power to earn a livelihood, or will it merely mean a life of dependence and partial invalidism? Further, if there is apparently complete recovery, what are the chances of a relapse in the years to come? In all these questions, so vitally important to the patient, of such urgent interest to his friends, we are asked to form some estimate of duration. Will he get well? How long will it take? Will he be able to get back to work? Is there any chance of his getting another attack? How long before he may consider himself practically safe from a relapse? These questions come tumbling out one after the other, and others of a similar nature, referring to the special circumstances of each individual patient, often follow in rapid succession. Truly the man who is called upon to give a prognosis in a case of pulmonary tuberculosis has a difficult task to perform and a great responsibility to undertake.

There is no rule which will apply to all cases, no

formula which can be employed to satisfy all inquirers—each case must be considered in connection with all the circumstances, and an opinion reasoned out for each individual patient. In coming to a decision we must take into consideration the present condition of the patient, the extent and degree of activity of the disease processes, the resisting power of the individual. We must consider the type of the disease, the length of time during which it has been in progress; and the condition of other organs, especially in respect to the presence of tuberculosis. We must also take into account the age, sex, and physique of the patient, his family history, the conditions under which he is living (pecuniary as well as hygienic), the nature of his occupation, and the kind of employment he will take up after treatment.

Of all these various points which must be examined and weighed there is probably not one which is of such general and such essential importance in prognosis as the *stage of the disease* in the lungs. The curability of consumption bears a very direct relation to the stage of the disease at which systematic treatment is commenced. Not only is the expectation of cure well justified in early cases, but the time necessary to effect a cure will be much shorter if treatment is commenced in an early stage than when the disease has become more advanced.

With every advance of the disease the expectation of cure diminishes, the length of time required to bring about arrest of the disease increases, and the ultimate result in the event of arrest becomes less satisfactory. This is now well known to all who have studied the treatment of consumptives, and is evidenced in all reports of sanatoria in this and other countries. It should therefore be the aim of every medical practitioner to ensure the early recognition of tuberculosis in the lungs with the object of commencing systematic treatment without delay.

In regard to Prognosis, what do we understand by an Early Case? Naturally, the length of time which has elapsed since the earliest symptoms—that is, the duration of the disease—is one of the factors to be considered. It is, however, not the only one, since the disease-processes advance with different degrees of rapidity in different cases; so that two persons becoming infected at the same time may be at very different stages of the disease at the end of a month or two. Nor can we define a certain stage of the disease-process in any part of the lung as being our measure of an early case; for in one case the disease may advance quickly to softening in a restricted area of the lung, whilst in another it spreads throughout the organ without showing great activity in any part. With the element of time we must also consider the extent of lung involved as well as the stage of development of the disease-process in the area of most advanced mischief.

The most satisfactory condition is where, with a short history, a restricted area of one lobe is alone involved and the mischief has not advanced beyond consolidation. It is in sending the patient for advice whilst in this condition that an attack of hæmoptysis, coming without any previous suspicion of lung trouble as the first warning or symptom of illness, is so important.

The significance of the amount of lung involved as a guide to prognosis is well illustrated by the following table, which is compiled from the reports of the Mount Vernon Hospital.

TABLE SHOWING RELATION OF IMPROVEMENT TO NUMBER OF LOBES AFFECTED IN 2,720 CASES OF PULMONARY TUBERCULOSIS.

Lobes Affected	Cases	Much Improved	Improved	Total Improved
1	877	512 (58.38 %)	251 (28.62 %)	763 (87.00 %)
2	1,015	334 (37.83 %)	352 (34.67 %)	736 (72.50 %)
3	515	116 (22.52 %)	183 (35.53 %)	299 (58.05 %)
4	277	42 (15.16 %)	81 (29.24 %)	123 (44.40 %)

When we examine the cases in which actual arrest of the disease has occurred, the figures are even more significant, as the following abstract from the Report for 1908 of the Northwood branch of the Mount Vernon Hospital shows:—

“Of 55 cases in which the disease was arrested, 49—or 89 per cent.—were patients with only one lobe affected. The remainder had two lobes affected. The disease could not be considered arrested in any of the patients with 3, 4, or 5 lobes affected.”

The *activity of the disease*, as shown by the general condition of the patient and the temperature record, is of some importance, but must be considered in relation to the stage of the disease. The temperature should always be taken into account in prognosis, examining its height, daily range, and the tendency to be readily disturbed. The rapidity of the pulse should also be noted, and also whether it is easily quickened. Instability of pulse and temperature are significant of activity of the disease and of small resisting power.

In later stages of the mischief raised temperature and quickened pulse have less significance in themselves in prognosis, since these signs are to be expected as the disease extends. Of greater importance as a guide to prognosis when the disease has advanced sufficiently is the *type which the illness shows in its development*. Broadly speaking, we may recognise three well-defined types: First, there is the acute limited infection, where the process, though active, is confined to a limited area in which the disease expends itself, consolidation being rapidly followed by softening and excavation. Such cases, though perhaps very acute, with high temperature and possibly great general disturbance, are often very satisfactory in their complete recovery, especially if the softening quickly opens into a fair-sized tube through which the *débris* may be expelled.

The second type is sub-acute: in this the disease spreads over a wider area, but never reaches any great activity in any part; it extends itself in all directions, instead of concentrating its activity on one spot.

This type is very unsatisfactory; its progress is comparatively slow, but its advance cannot be checked, or at least is difficult to check, so that though the illness is not so marked and the temperature rarely so high as in the first type, the hope of ultimate arrest is less, the time required to bring about arrest is longer, and the ultimate result, when arrest is brought about, less satisfactory.

The third type—less common than either of the others, except in persons beyond middle age, in chronic bronchitics, or in alcoholics—is chronic in its course, leads to fibroid overgrowth in the lung, and though its progress is slow it does not tend to arrest. Life may be prolonged for years, but it is the burdensome life of the chronic invalid. This classification is by no means exhaustive; for example, there are the so-called pneumonic cases, where a considerable extent of lung may be involved and the disease-processes develop rapidly. Nor are the types always well defined; but many cases in which we are called upon to forecast the future will fall into one or other of the three classes sketched above.

Having determined the probable tendency of the type of disease present, we must endeavour to ascertain how this may be modified by the extent of *resisting power in the individual*. The young and robust country labourer who has become accidentally infected will be able to overcome an acute and active tuberculosis, which would be much more serious in the weedy indoor worker of a large city, and which would probably prove rapidly fatal to the flabby victim of dissipation. In assessing the amount of resisting power, we must take into consideration the hereditary tendency to suffer from tuberculosis as shown by the family history, the physique and “condition” of the patient, the shape and expansion of the chest, the condition of the circulatory organs, the digestive powers, etc. The mode of life, condition of the home, occupation, and habits all have a bearing on the question, as do also such details as the state of the finances and other matters which may cause anxiety or worry to the patient. It is not uncommon to find that a patient, who is doing less well than had been anticipated, is worried over the expenses of his treatment or the difficulties in which his family is placed by his prolonged absence from work. Many a man, whose chances of recovery seemed most favourable, has had to throw away his chance because of the necessity of returning to work before the disease was completely arrested.

In gauging the resisting power in any individual there is much which only knowledge of men and experience of illness can teach. Temperament cannot be entirely left out of account. There are those who seem determined to get well and appear almost to overcome the disease by their pluck and fighting qualities; others give up the fight before it has well commenced and need constant encouragement to make them offer even a poor resistance. A type familiar to most of us—neurotic, excitable, and easily upset—offers poor resistance to illness.

In reference to occupation, we must sometimes consider the kind of employment which the patient will take up when he returns to work, for this may have an important bearing on the permanence of his cure.

After leaving a sanatorium, or after a term of systematic treatment at home, when the disease has become arrested it is usually necessary to exercise care for a considerable time in order to ensure that the disease does not light up again into renewed activity. The nature of the employment is frequently of less importance than the conditions under which it is carried out. Of all unhealthy occupations, one of the most injurious is that—whatever its nature—which does not bring in a living wage. It is often better to return to an occupation which in itself is unsuitable, but which is well paid, than to take up a light and healthy job which will not bring in enough to live on. For this reason there is much to be said in favour of a discharged patient returning to his old occupation.

The age of the patient has an important bearing on prognosis. In young children the outlook is always grave, and the younger the child the more serious is the danger. Yet the large number of cases of children dying from other causes in which scars of old and healed tuberculosis are found in the lungs shows that recovery from pulmonary tuberculosis frequently takes place. From the age of ten until puberty the mortality from pulmonary tuberculosis again rises, especially amongst girls.

Early adult life (18 to 30 years) seems to be the most favourable to recovery; after about 30 or 35 years of age recovery appears to be slower, and after 45 years the chances of ultimate cure are comparatively small, though the disease may become quiescent and life may drag on for several years. Many middle-aged consumptives so far recover as to be able to work, with occasional lapses when they have to give up for a time. This may go on for several years, during which they are able to earn a living, and thus an "economic cure" may be attained; but the disease is not actually cured, and occasionally lights up into activity until the "chronic consumptive" becomes a total invalid. In patients of 50 and over cure is hardly to be anticipated, though the progress of the disease is usually slow.

Sex has some bearing upon prognosis, especially during the years of sexual activity. Girls at about the age of puberty frequently show little resisting power against tuberculosis, though I have noticed that if the disease commences at this period girls in whom menstruation has not yet occurred seem to have a better chance of recovery than those in whom the menstrual periods have become established. It may be, as I have suggested, that a reserve of energy stored up at this period, if not already expended in the establishment of functional development, may be utilised in combating the disease. During the child-bearing period we have to take into account the debilitating effects of frequent pregnancies and of over-prolonged lactation. Women whose strength has been sapped by these causes are unable to offer adequate resistance to an attack of tuberculosis. When consumption attacks a woman during pregnancy, or when a consumptive woman becomes pregnant, the disease frequently remains more or less quiescent; after confinement, however, the disease often becomes active and advances rapidly.

Sex has an influence on the nature of the employment and the conditions of life generally. The

married woman who becomes consumptive is freed from some of the anxiety as to ways and means which worries the male consumptive on whose work the family relies for a livelihood. The woman engaged in domestic duties can attend the hospital for advice without the risk of losing her employment, and as a result we find that a larger proportion of women than of men are admitted into hospitals or sanatoria in the early stages of the complaint. The men cannot afford to give up work, either to seek advice (when the nature of the complaint may be recognised early), or to enter the sanatorium for treatment—until the disease is so advanced that work is almost impossible. Women are said to recover from pulmonary tuberculosis more frequently than men. If this be so it is probably to be explained by the larger proportion of women who come under treatment before the disease has become advanced. In the Northwood Report (1909) it is stated that in 27.9 per cent. of the males and 46.5 per cent. of the females only one lobe was affected. As the result of treatment the disease was arrested in 9.1 per cent. of all the male patients, and in 18.2 per cent. of all the females. The male cases admitted generally presented much more extensive disease than the females.

When a patient has been under observation for some time, and the course of the disease has been watched, there are further data by which we may be guided in our prognosis. The temperature records for several weeks show clearly the severity of the toxæmia, and possibly will give some indication of the recuperative power of the patient. A temperature which remains continuously above the normal shows an unfavourable case, as does also the oscillating temperature with wide diurnal range. Both of these types go with severe toxæmia.

A persistently subnormal temperature may indicate small resisting power, though it must be borne in mind that under open-air conditions, especially in the colder weather, the patient's temperatures are frequently below the normal for many weeks. The progress towards recovery is often marked on the temperature chart by three periods. At first the temperature is persistently above the normal, gradually falling to below 98°, where it remains with slight oscillations for a few weeks, and then, as strength is regained, rising to the normal line and varying only about half a degree on either side of this.

The diminution in pulse-rate and increase in weight are also indications of improvement, though too much reliance should not be placed on the increase in weight. The presence or absence of bacilli in the sputum gives little or no assistance in prognosis, and the number of bacilli and the variations in their number at different examinations are of no significance in this direction. Excavation and evacuation are often important stages in the curative process, but will be accompanied by increase—and possibly by very considerable increase—in the number of bacilli found in the sputum. Some prognostic indications may be obtained by repeated observations on the opsonic index, but these are uncertain and unreliable except in the hands of experts in this method of examination.

Complications may seriously affect the prognosis in pulmonary tuberculosis. Tuberculosis in other organs not only taxes the general resisting power of the body, but may be an indication that resistance has been overcome and is inadequate. Phthisis supervening in an individual who is already the subject of a tuberculosis affecting bones or joints is unlikely to take a favourable course; whilst on the other hand the infection of other organs—larynx, intestines, kidneys, liver, etc.—in a phthisical patient makes the prognosis additionally grave. Albuminuria and persistent diarrhoea are often signs of the beginning of the end.

Laryngeal tuberculosis is an unfavourable complication. Life may be prolonged for several years even when the larynx has become infected in the course of pulmonary tuberculosis, and cure apparently occurs in certain cases. When the larynx is affected at the commencement of a pulmonary tuberculosis, the lung and the larynx being attacked almost simultaneously, the prognosis is, in my experience, very unfavourable, and the course is generally acute and often short.

Complications independent of tuberculosis are often met with in cases of consumption. Heart disease, if it does not predispose to tuberculosis, adds to the seriousness of the illness; when at all advanced, especially when compensation has failed and the heart is dilated, it is a very unfavourable complication. Bronchitis is a serious addition to pulmonary tuberculosis; bronchiectasis adds much to the discomforts of the disease and to the risks of secondary (septic) infections. Pleurisy is of slight importance in prognosis unless there is considerable effusion; if the effusion is purulent, necessitating operation, there is an added danger. Intercurrent diseases—acute illnesses coming on in the course of pulmonary tuberculosis—may check improvement, and may light up the mischief into activity, causing it to advance with a rapidity and severity greater than at any previous stage of the illness. On the other hand, we see consumptives pass through a sharp attack of influenza or other illness with no ultimate ill-effects.

Since tuberculosis progresses comparatively slowly, and accidental complications may at any time occur, there is always the chance that our prognostications, however carefully reasoned out, may prove to be unrealised. Hæmoptysis or meningitis, pneumothorax or some other unforeseen accident may change the whole course of the illness.

I was once called in consultation to a case of consumption in a lady of 50, in order to advise as to the movements of a daughter who was abroad, and whom the mother was anxious to see. It was a case in which everything pointed to a chronic course, and in the ordinary way it seemed that any time within the next six months would do for the daughter's return. Some chance remark by the nurse about the patient's condition during the preceding night made me think of meningitis, and I fortunately communicated my suspicions to the medical attendant, and advised sending to the daughter without delay. The patient died within a week or ten days. It does not do to be too dogmatic in giving a prognosis in pulmonary tuber-

culosis. The most favourable cases sometimes disappoint us, and, on the other hand, some of the apparently hopeless cases occasionally get well. I have seen cases of active tuberculosis in the lungs which showed no signs of improvement for six months suddenly begin to improve and ultimately recover. After all, we are asked to gauge from experience of similar cases the probable course of events; we ought not to be expected to prophesy.

We may be misled in the ultimate result; we must, however, expect to be proved wrong if we attempt to fix a time at which the result, favourable or otherwise, may be expected. The very expression of an opinion may lead to an alteration of conditions which have a material influence on the event. The expectation that the patient will live but a few weeks longer perhaps leads to such additional attention and solicitude that his life is prolonged for months—as, for example, when a poor patient is removed to the infirmary or to a home for the dying. On the other hand, we express the opinion that a hospital patient may live several months, and he is in consequence taken home, to die in a few days under the altered conditions.

This consideration suggests another element which must be taken into account in making a prognosis, namely the conditions under which the patient is placed, and the facilities for systematic treatment. Immediate removal of a patient to a good sanatorium may make all the difference to his chances of recovery; delay in commencing systematic treatment may destroy his chance completely. It is this which makes the lamentably inadequate accommodation for the sanatorium treatment of poor consumptives such a serious national misfortune.

I have said that in the matter of time, our estimates must frequently be at fault. It is well, however, to bear in mind that only in quite early cases can we anticipate cure in so short a time as three months. The activity of the disease may in more advanced cases be arrested in about three months; but further care will be required for many months, and complete cure may be a matter of years. When, however, arrest has been brought about, the individual may follow his employment, though he should remain under occasional medical supervision. Many "unsatisfactory results of sanatorium treatment" are due to the want of appreciation of the difference between quiescence and cure, which has led to the premature relinquishing of necessary precautions and consequent relapse.

Though not, strictly speaking, involved in the medical aspect of prognosis in consumption, we should bear in mind the possible moral effect of prolonged idleness—or at least of rest in comparative comfort—of persons of slight strength of will. It is found that amongst the working-class patients there is a danger that the long stay in a sanatorium which is often necessary for cure results in a distaste for work, so that when discharged physically fit for work they have lost all desire to work—a moral deterioration which materially diminishes their usefulness as wage-earners. It is in counteracting or overcoming this that labour colonies for cured (or arrested) consumptives would probably prove of the greatest value.

MEDICINE.

ASCITES—II.

PHYSICAL SIGNS (*continued*).

By far the most important sign of ascites is the effect which is produced on the line of dulness by a change in the posture of the patient. If there is dulness in the flanks and resonance over the front of the abdomen when the patient is lying perfectly flat upon his back, it will be found that if he turns and lies on one side the uppermost flank becomes resonant and the line of dulness on the other side rises towards the median abdominal line. This phenomenon is clearly due to the fluid gravitating to the most dependent parts. It is very helpful sometimes in distinguishing between an impaired note in the flank due to free ascitic or peritonitic fluid on the one hand, or to absence of air from the colon owing to its collapse or to its being overloaded with fæces on the other.

It sometimes happens that owing to adhesions and the matting together of the intestines in cases of chronic peritonitis, the ascitic fluid becomes shut off as local collections, in which case the phenomenon of gravitation to the lowest part of the abdominal cavity no longer occurs. The diagnosis of such cases of "encysted ascites" must clearly be difficult unless the case has been followed from a time at which the ascitic fluid was not yet shut off by adhesions in this way.

In ordinary cases of ascites the liver is apt to be pushed upwards, and in consequence the right side of the chest becomes dull to percussion at the fifth or fourth or even the third intercostal space in the nipple line instead of at the sixth as usual.

If only a very small quantity of fluid is present the abdomen may be resonant all over when the patient lies on his back; if such be the case, and the posture be now changed for that of the knee-elbow position, the umbilical region—previously resonant—will be found to have become dull.

Auscultation is seldom of any assistance in the diagnosis of ascites. The most that can be said of it is that now and then in a case of ascites due to inflammation of the peritoneum a friction rub can be detected over the liver or the spleen when the patient takes a particularly deep breath.

Mensuration may be of assistance in making the differential diagnosis of ascites. In a typical case the maximum circumference of the abdomen is at the level of the umbilicus. The latter remains nearer to the pubes than to the ensiform cartilage just as it normally is, and it is equidistant from each anterior superior iliac spine.

In women it may be necessary to make a vaginal examination. The vagina is usually felt to be shortened; the uterus may still be freely movable, but pushed downwards and flexed; and Douglas's pouch may be obviously distended with fluid.

Now and then it is not until a trochar and cannula have been used to withdraw some of the fluid that the cause of the abdominal distension can be determined. In ascites the fluid varies greatly according as it has arisen by transudation or by exudation. If

due to transudation it is usually clear, pale yellow, alkaline, and of specific gravity, 1,012 or less; it does not coagulate spontaneously on standing; it contains a small amount of total solids—from 1.5 to 2 per cent.; it is free from peptone, but contains serum-albumen; microscopically it is found to contain few cell elements, though in exceptional cases the fluid has been known to be hæmorrhagic or chylous. If due to exudation, the fluid may be clear, but more often is slightly turbid and yellowish or greenish-yellow; it is alkaline, and the specific gravity is usually over 1,015; the exudate may form a thin, floating clot on standing, usually within twenty-four hours, and often in a much shorter time than this. Serum albumen, serum globulin, and traces of uric acid, urea, and sugar are present. Microscopically numerous cell elements are seen, a few red blood-corpuscles, leucocytes, large peritoneal squamous cells, and granular detritus. Exudations may also be hæmorrhagic, sero-purulent, purulent, or chylous.

THE DIAGNOSIS OF ASCITES FROM OTHER CONDITIONS.

Amongst conditions that may lead to a diagnosis of ascites when none is present may be mentioned:

(1) Tympanites, and the various causes of it; (2) ovarian cyst; (3) pregnancy; (4) obesity; (5) an enormously distended bladder; (6) phantom tumour; (7) hydronephrosis; (8) pancreatic cyst; (9) enormous enlargement of liver or spleen; (10) enormous dilatation of the stomach. A brief discussion of the main points of distinction in each of the above becomes necessary.

Tympanites is the term used to signify distension of the abdomen from excessive accumulation of gas within the intestine, or more rarely from the presence of free gas in the peritoneal cavity. The following are some of the causes of tympanites: Intestinal obstruction; bowel paralysis from acute peritonitis; certain acute diseases, such as typhoid fever, lobar pneumonia, septicæmia, and so forth; perforation of the stomach or intestine from ulceration or from injury; myelitis, fractured spine, and some other affections of the spinal cord; hysteria.

Tympanites is distinguished by the following physical signs:—

The abdomen is uniformly distended, frequently to an enormous extent. It becomes globular in shape. There is no marked bulging of the flanks, and change of posture does not alter the shape as in ascites. The distension of the abdomen may be asymmetrical if the tympanites is due to obstruction of the upper part of the small intestine, or if any particular portion of the intestine becomes excessively distended. The outlines of distended coils of intestines may be visible, and if there is no peritonitis peristaltic movements may be observed. The skin is stretched, and it may be shiny. The umbilicus may or may not be raised level with the surrounding skin; its normal relative position is retained. The

cardiac impulse may be displaced upwards and outwards.

The surface of the abdomen feels smooth, tense, and drum-like. In cases of chronic obstruction of the large intestine the distended coils of bowel may be felt, and sometimes the peristaltic movements in them. No fluid thrill can be made out.

There is a tympanitic note all over the abdomen, no matter in what position the patient is placed. The

splenic dulness may be replaced by resonance. The liver dulness may be diminished or, in extreme cases, absent. It is of great moment to remember that diminution or absence of the hepatic dulness is often due to resonance from the distended colon being conveyed through the liver, and that therefore the sign is very far from signifying perforation of a hollow viscus as is sometimes stated.

(To be continued.)

LACTIC ACID PREPARATIONS.

THERE has lately been so strong a development of the lactic acid bacillary treatment of gastro-intestinal affections that some definite criteria would seem to be essential by which to judge whether a given proprietary lactic acid preparation is likely to be of any value or not. We need not enter into a detailed discussion of the *raison d'être* of the treatment itself; The remarks made by Dr. Herschell in his book upon the subject, recently reviewed by us, summarise present-day views upon the matter concisely.

The first difficulty confronting the medical man who wishes to make use of lactic acid bacilli or their products as therapeutic agents is the selection of the best preparation from amongst the number now upon the market, some of which are good, some useless, some positively harmful. There are at least five different types, each represented by various species. They are (1) Yoghourt prepared with the *Maya* ferment; (2) milks that have been soured ready for use; (3) liquid cultures of bacilli for internal administration supplied in bottles; (4) liquid cultures to be used for souring the milk at home, usually supplied in phials or in tubes; and (5) dried cultures supplied in the forms of either powders or tablets, to be used either for souring milk that is to be consumed, or else for internal administration just as supplied.

It seems to be generally allowed—and Dr. Herschell has tested the point and proved it—that the dry preparations are better than those that are liquid. At the same time many even of the dry preparations are relatively inefficient, especially when the tablet is not readily soluble in water. Preparations that effervesce are to be received with considerable caution, because one of the devices for masking the insol-

bility of the base of which a tablet is composed is to mix an effervescing powder with it. This certainly causes the mass to disintegrate, but the solubility is apt to be more apparent than real, to say nothing of the fact that the salt and the acid used to produce effervescence are more than likely to interfere with the proper growth of any lactic acid bacilli that may be present.

As a practical guide in the selection of the tablet or the powder to employ, Dr. Herschell lays down the following rules:

In the case of a Tablet.—(1) It should be pure white in colour. (2) It should be odourless, both when in the dry state and when moistened with water. (3) When immersed it should disintegrate into a fine powder within three minutes without the aid of crushing or stirring, and this disintegration should not be accompanied by effervescence. (4) The suspension should be neutral to litmus paper. (5) When cultivated on Cohendy's serum or other suitable medium it should give an abundant growth of the Bulgarian bacillus (the bacillus of Boucard), and no other micro-organism should be present.

In the case of a powder for the souring of milk.—(1) It should produce a good firm clot upon pure milk in eight hours at a temperature of 100° F. (2) The clot should be nearly white, spongy, with a faintly acid smell and taste, but without any acidity. (3) No brown sediment should form during the incubation. (4) The only organisms present in the soured milk should be the Bulgarian bacillus, together with one other organism that is added to prevent the saponification of the milk fat.

It need scarcely be added that many advertised preparations fail to comply with these simple tests.

SCOPOLAMINE FOR TREMOR.

SCOPOLAMINE has been found to be of considerable use in decreasing the tremors of paralysis agitans, and if the complaint is in an early stage the troublesome shakings of the hands may not only be decreased but in some instances actually abolished for the time being. Even in those more decided cases in which this drug only succeeds in lessening the tremor, the latter remains lessened for some days afterwards. The drug is given hypodermically in precisely the same way as one administers a morphia injection; the salt used is the hydrobromide, and the dose may vary from $\frac{1}{200}$ grain to $\frac{1}{100}$ grain once daily.

Some other types of tremor besides that of paralysis agitans may be mitigated by scopolamine hydrobromide, though certain types are scarcely

benefited at all. The tremors of general paralysis of the insane, for instance, are not relieved, nor are those of Graves' disease (exophthalmic goitre). The movements or shakiness of hereditary tremors, on the other hand, and also those of alcoholic tremor and of disseminated spinal sclerosis, have been much benefited sometimes; so that, although one must not be disappointed if a given case of tremor is not relieved by this treatment, it is a therapeutic measure that is well worth bearing in mind in cases where tremor is a troublesome symptom.

Some patients react to smaller doses of the drug than do others. The susceptibility to it should be ascertained in each case by starting with smaller doses, which may be gradually increased.

SURGERY.

CONTRACTURES AND DEFORMITIES OF THE HAND.

THE hand is liable to a large number of conditions which impair its usefulness; and these, though many of them are slight in themselves, may have serious results in preventing the patient from following his occupation successfully, or at any rate may impair his wage-earning capacity.

The best known of these deformities is undoubtedly Dupuytren's contracture. This consists of a flexion of the fourth and fifth fingers, often of both hands. It is not always bilateral, however; but when it is so, it starts in one hand before the other. At first the little finger becomes gradually contracted down into the palm, and sooner or later the ring finger follows suit. Extension is impossible, and in an advanced case the tip of the finger can hardly be raised from the palm. The disease starts most often in early adult life, and little is known of its causation and pathology, except that in many cases a hereditary element can be discovered in the shape of a family history; in other cases gout seems to be a determining factor. Occasionally this contracture comes on in later life, and then it appears to be definitely due to chronic irritation of the palm such as is produced by the use of a walking stick or by the patient's occupation; for instance, the pressure of the handle of an instrument, as in carpenters.

When an attempt is made to straighten the deformed fingers, it will be found that the inner half of the palmar fascia stands out as a thickened band, for it is the palmar fascia and not the flexor tendons that is the primary cause of the trouble. It is easy enough to get the fingers straight again by operation, but it is essential that this should be radical. It is not sufficient to tenotomise the constricting bands subcutaneously. An open operation must be performed. The actual incision is not a matter of great importance, provided that a satisfactory exposure of the parts is obtained. An incision parallel to the axis of the limb over the most prominent portion of the thickened fascia, with two short ones at right angles to the ends of the first incision, so that two skin-flaps can be turned back, will meet the demands of the case very well. The whole of the thickened fascia must then be carefully dissected away. When this is done it will generally be found that the fingers can be straightened out completely. So far little trouble is experienced. But it is in *keeping* the fingers straight and in preventing a recurrence of the deformity that the great difficulty is experienced.

The hand should be put up on a splint which keeps the fingers extended; and this should be kept on until the wound is healed. It may then be taken off, but the fingers must be actively extended several times daily for some months. But the really important point in the treatment is to prevent contraction of the fingers during sleep. The tonicity of the flexors is much greater than that of the extensors, and when voluntary control is removed by sleep the hand tends naturally to contract. A simple but effective contrivance to overcome this may be made as

follows: A flat piece of wood is cut out to the shape of the hand. This is strapped to the back of the hand each night. On its anterior surface five leather ringlets about one and a-half inches in length are applied. They are so placed that when the fingers are inserted into them their centre corresponds to the line of the terminal interphalangeal joint. This will effectually prevent the fingers from bending. This apparatus must be worn every night until the fingers remain straight without its support. The length of time necessary will vary in each case, but it is rarely less than six months. A good result should never be promised, because the operation itself causes a certain amount of scar tissue in the palm, and this tends in time to contract and reproduce the original deformity.

Most of the other deformities met with in the hand are the direct result of septic infection or of injury. It is the rule rather than the exception to find some deformity or loss of function in a finger which has been the site of a whitlow, especially if the infection has invaded the sheath of the flexor tendon. In such a case the severity of the inflammation prevents the adoption of early passive movement. When the inflammatory process has subsided it is often found that the tendon is adherent to the anterior surface of one or more of the phalanges, and immobility results. In these cases an anæsthetic should be given and the adhesions should be broken down. Afterwards passive movement and massage should be persisted in to prevent their re-formation; but a perfect result, as far as function is concerned, is rarely obtained.

Ischæmic contracture of the flexors of the forearm sometimes occurs after simple fractures. In most cases it results from the injudicious use of splints; the usual cause being that splints are applied and not taken down often enough. For it must be remembered that a fracture is followed by swelling of the limb. Splints may be applied immediately after the fracture, and they may then not be too tight. But if the limb swells up afterwards the splint may and does cause injurious pressure on the muscles, depriving them of their nutrition and leading to atrophy and contraction. In all cases of fracture, therefore, the splints should be taken off on the next day to examine the condition of the limb. But ischæmic contracture occasionally occurs when no splints have been applied. This is sometimes seen after fractures of the forearm in young infants, especially after separation of the lower epiphysis of the radius. The inflammatory reaction is so great that the muscles of the forearm are damaged and rendered atrophic.

However produced, a contraction of the flexors of the forearm and wrist follows, which is very intractable. The muscles are so much shortened that even under an anæsthetic extension is impossible. The only treatment is to perform a tenoplasty, but the result is nearly always unsatisfactory.

DISEASES OF CHILDREN.

NASAL DISCHARGE.—III.

Hypertrophic rhinitis is a rare cause of bilateral discharge, but it may follow on recurrent coryza or adenoids. It affects all the mucosa, especially that of the inferior turbinals, and leads to chronic catarrh and bilateral stenosis. Some cases can be cured by tonics and local treatment. The galvano-cautery is useful, and pendulous masses can be removed by snares. *Atrophic rhinitis* is almost unknown under twelve years of age. It may be due to congenital syphilis, and has ensued on myiasis.

A *Unilateral Discharge* is generally due to a foreign body, occasionally to myiasis, nasal polypus, tumours, tuberculosis, rhinitis caseosa, some of the affections which give rise to bilateral discharge, and rarely in children to disease of the antrum, frontal, or ethmoid sinuses.

Foreign Bodies are the main cause, and the nature of the discharge depends more on the kind of foreign body than the duration of its presence. At first it merely causes a little mechanical irritation, perhaps none at all if it is a smooth bead or button. Thus, a button during a period of six months only caused a slight discharge; a disagreeable one for three years was due to a cherry stone, which became covered with a fibrinous deposit; while a stinking discharge for six weeks was due to a piece of window curtain (H. C. Cameron). Commonly the discharge is very chronic, profuse, muco-purulent or purulent, often blood-stained, and excoriates the nares. The body is nearly always in the inferior meatus. In recent cases by exciting sneezing or getting the child to blow strongly, with the unaffected nostril compressed, a smooth foreign body can often be evacuated. If not, apply cocaine as an astringent and anæsthetic, stand behind the child, and push a probe or director gently along the floor of the nose, thus displacing the body upwards. Then, using the margin of the floor as a fulcrum for the director, push the object upwards and forwards, and it will probably glide downwards and out. A general anæsthetic may be needed. Subsequently apply alkaline lotions, with a disinfectant if necessary. Syringing is unsuitable treatment, for it may drive septic matter up the Eustachian tube.

Myiasis (maggots) is due to the meat fly, *musca vomitaria*, laying its eggs in a fold of mucous membrane. An acute rhinitis is set up and may end in ulceration, perforation of the septum, or even foetid atrophic rhinitis. The maggots can be killed by chloroform vapour, or by warm olive oil, liquid vaseline and such like oily preparations, which suffocate them by blocking up the pores or stigmata of the respiratory system. They can then be syringed out.

A *nasal polypus*, mucus or fibrous, is rare. It causes unilateral obstruction and serous discharge; sometimes bilateral symptoms, occasionally headache, sneezing, cough, and asthma. It is removed by snare or forceps. Of *tuberculous disease* there are only about eight cases on record. It may cause a large tumour of granulation tissue, resembling sarcoma, and ulceration and destruction of the cartilaginous septum. The diagnosis depends on microscopical examination. It is treated by curettage.

Rhinitis caseosa is also rare and almost invariably unilateral. It is probably due to chronic suppuration and retention of pus, with subsequent changes in the pus which becomes caseous, putty-like, and foetid. Various organisms have been found. It is somewhat like the tuberculous affection, but there are no tubercle bacilli, and it differs from cholesteatoma in the absence of cholesterol.

Mode of Examination.—Complete examination is often difficult because of the small size of the nose and the nervousness of the child. Simply elevating the tip of the nose and lifting the ala upwards and outwards with a probe gives a good view of the interior meatus and may enable a diagnosis to be made of foreign body, diphtheria, sinus disease, etc. Often a mirror and a nasal speculum are needed.

Diagnosis depends on the results of examination; the history—e.g. insertion of a foreign body, congenital syphilis, exposure to diphtheria, influenza, measles, etc.; the nature of the discharge. Chronicity favours adenoids or syphilis. Very long duration indicates a foreign body.

Thick muco-pus generally means adenoids or syphilis. A blood-stained discharge is likely to be due to syphilis, diphtheria, or a foreign body. Blood and pus may be present in tuberculous disease. Pure liquid pus is due occasionally to a foreign body, but more commonly to sinus suppuration. The pus is liquid, yellowish, has a peculiar odour, is seen above the inferior turbinate bone and flows over the upper part towards the septum. In atrophic rhinitis the discharge is mucoid and watery. Large brownish or greenish-grey crusts and plugs are formed, and there is distinct ozæna. The nasal cavity is large and the mucous membrane atrophied. In rare cases a profuse watery discharge has been due to the escape of cerebro-spinal fluid by the nose. The general treatment of all nasal affections is by cleanliness, using alkaline lotions to dissolve the mucoid secretion and evacuate it, mild disinfectants if the discharge is at all offensive, and the removal of any local cause, such as adenoids and foreign bodies.

Prophylaxis is of little value, except in the prevention of simple recurrent acute coryza, and for chronic coryza in fat flabby children. Moderate starvation, a reduction in the amount of carbohydrate food, and an increase in fats and undercooked meat, is beneficial. The other measures include fresh air, outdoor life, sea air, brine baths, exercise, and suitable clothing. Judicious hardening is essential. Avoid cod-liver oil, arsenic, iodine in some form, hypophosphites, and possibly phosphorus, are the drugs most valuable for improving the general health. It is of the utmost importance to guard infants during the first year of life, especially if at all delicate, from exposure to the infection of the influenza cold, true influenza, measles, and diphtheria. Moreover, the mildest attack of nasal catarrh should be treated, for its secondary effects, if progressive, are liable to be exceedingly dangerous.

OBSTETRICS.

THE DIFFICULTIES OF OCCIPITO-POSTERIOR PRESENTATIONS.

Of all obstetric difficulties, those encountered when the vertex presents in the occipito-posterior positions are the commonest. They are responsible too for a very considerable foetal mortality, and for a large proportion of the maternal injuries and morbidity in child-birth. These facts are by no means universally recognised, chiefly because posterior vertex positions are so often undiagnosed before birth and unrecognised after it. Many a patient is said to have contracted pelvis on the strength of one or more difficult labours, the real causes of which were occipito-posterior presentations.

The difficulties in connection with these presentations are chiefly the non-appreciation of the frequency with which these positions of the vertex occur, the difficulties of diagnosis, the difficulties of the mechanism of natural delivery, and finally the proper treatment of them when diagnosed. The third vertex presentation or right occipito-posterior occurs, according to Eden, in 20 per cent. of the vertex presentations, and the left occipito-posterior in 1 per cent. only. The latter figure is in accordance with most authorities, but the probability is that it is too low, and that it is really nearer to 5 per cent. In any case, nearly a quarter of all vertex presentations have the occiput posterior with regard to the pelvis. The reason why anterior positions of the occiput are more common than posterior is usually said to be because the foetus accommodates itself more readily thus, owing to the large size of the occiput as compared with the frontal end of the head—the anterior parts of the pelvis being roomier than the posterior.

Difficulties of diagnosis occur because vaginal examinations are even now relied upon, instead of abdominal palpation. It is often a matter of great difficulty to recognise the position of the sutures and fontanelles of the foetal head when felt per vaginam. On the other hand, it is quite easy to diagnose posterior positions from the abdomen if the usual methods are adopted. The mere fact that the arms and legs of the foetus can be easily felt through the abdominal wall, and the prominence of the back cannot be recognised, is generally sufficient to indicate an occipito-posterior position. This, coupled with the recognition of one shoulder to the right or left of the mid line, makes absolutely certain the presence of an occipito-posterior position. The mechanism of delivery depends upon the presence or absence of flexion of the head on the trunk, and on a recognition of the anatomical shape of the important parts of the pelvic floor. All vertex presentations are flexed at first, but when the head enters the pelvis during the last weeks of pregnancy, the posterior occipital presentations are apt to have this flexion undone and slight extension substituted. The reason for this lies in the want of room in the posterior parts of the pelvis, which consequently prevents the large occipital end of the head descending as easily as the frontal end. It is a useful law to remember that the part of the

head which lies in front always descends easiest, and this applies equally to the breech presentations. Thus the head becomes deflexed to a greater or lesser extent, and the result may be that it sinks through the pelvis with neither the occiput nor the forehead anterior. That one or the other end of the head should be in advance is necessary for the rotation movement to occur normally, for whatever part is in advance will turn to the front. Hence it follows that if the forehead and occiput lie horizontally level they will impinge on the pelvic floor of their respective ideas at the same moment. They will then each try to rotate to the front, with the result that neither does so, and labour comes to a standstill in spite of strong uterine contractions. Fortunately, in most occipito-posterior cases the amount of deflexion which occurs is not great and is not sufficient to make the forehead the lowest part, or, what is more to the point, is not sufficient to prevent the occiput from being the lowest part. Consequently rotation takes place normally, and the occiput rotates to the front. If the forehead becomes the lowest part owing to excessive deflexion, then it naturally touches the pelvic floor first, rotates to the front, and a persistent occipito-posterior results. It is, of course, particularly the cases in which labour comes to a standstill because neither end of the head rotates, in which long delay and great difficulties arise, chiefly because the cause of these difficulties is unrecognised.

If these facts concerning the mechanism are grasped, treatment follows as a matter of common sense. Clearly we must have accurate diagnosis, and then we must supplement the mechanism by artificial aids. The simplest procedure is to flex the head by pulling on the occiput with fingers and holding it in this position during uterine contractions. This will not often succeed by itself unless the contractions are very powerful. It is much more often necessary to rotate the head with the whole hand introduced into the vagina. The head can be grasped with the whole hand, and the occiput can be artificially flexed and rotated around the right side of the pelvis in third positions and the left side in fourth positions. This manœuvre is assisted by pushing the anterior shoulder across the mid-line of the abdomen away from the occiput with the operator's external hand. It is not always possible to push the shoulder across, especially if all the liquor amnii has drained away. In such a case it is good treatment to rotate the head, disregard the twisting of the neck which occurs, and then put on forceps to prevent the head returning to its original position, and to deliver as an occipito-anterior. The method which has perforce to be adopted when the occiput is persistently posterior and lies in the hollow of the sacrum must depend upon the size of the child and the strength of the uterine contractions. In some cases the mother may deliver herself, but more often the head will have to be pulled out in this position with the forceps.

ORTHOPÆDICS.

SPRAINED ANKLE.

AN ordinary "sprained ankle" is usually regarded as a very simple lesion—one to be dismissed with a short rest and the elements of palliative treatment. While no doubt it is elementary enough and generally yields to the few measures that are taken to treat it, there are occasions when it is advisable to pay a greater amount of attention to this lesion than it often receives. In itself and when properly attended to, it is not a very serious condition, but there are several points about its diagnosis and treatment which the practitioner would do well to bear in mind when called upon to handle a case.

In the first place, what is a sprained ankle? There is a degree of vagueness and looseness about the term which is to be regretted, since a variety of conditions which agree only in this that they are painful lesions in the neighbourhood of the ankle joint caused by strain or some kind of injury are included under it. Technically, where the term sprain is used, it is indicative of a simple stretching of tissues, ligamentous, muscular or bony, not amounting to actual rupture. Of late years, however, it has been found that in many of these so-called strains there existed actual solution of continuity in the tissue, in the shape of a partial rupture of muscle fibre, displacement of a tendon or ligament, or dislocation or subluxation of a joint. The juxta-epiphysial sprain described by Ollier has been found to be a much more serious lesion than it was held to be, owing to the fact that there is nearly always in such cases a fissure or fracture involving the juxta-epiphysial junction. Generally stated, sprains in children are more serious than in adults: a much lesser degree of violence is able to produce rupture of or damage to the child's tissues than is the case in the adult, and although the reaction that ensues upon such injuries may not be so great in the former as in the latter case, the ultimate results are apt to be worse where growing tissues are concerned. Sprains and strains of the foot are particularly difficult to classify or adequately to differentiate owing to the impossibility which often exists of definitely diagnosing the exact lesion. With the help of the *x*-rays a "sprained foot" can often be shown to be a relatively more important condition, showing a definite lesion of one of the metatarsals or of one or other of the tarsal bones; but without the invaluable aid which this means of ascertaining the condition of the joints and bones gives us, it is often extremely difficult to satisfy oneself that no more serious lesion than that usually included under the term sprain exists. Such indefinite conditions can all be classed as sprains, though very probably in the majority some definite rupture of tissue or fracture of bone is at the root of the trouble.

The practitioner is then first of all called upon to diagnose the case as one of sprained ankle—a matter which is not always easy. The typical signs and symptoms of such a lesion are sufficiently described in text-books, and need not be enumerated here. It is worth while, however, to point out that swelling and œdema are by no means uncommon after what are called simple sprains in the region of the ankle.

Such œdema and swelling may extend over the whole foot, making it exceedingly difficult to find the ordinary bony landmarks and for the examiner to satisfy himself as to their integrity. In cases where the history of injury is wanting or slight, a sprain may be confounded with a much more serious condition such as tubercular disease, acute rheumatism starting in the ankle, or some form of acute arthritis or tenosynovitis. Again, the converse holds good, and a grave lesion may be regarded as a simple sprain and treated as such with disastrous consequences. This is especially the case when the patient states, as he so very often does, that the condition is due to an injury. Every sick person attempts to find a cause for his complaint, and orthopædic lesions are no exception to this rule. Thus a patient may come to the surgery with the self-made diagnosis of sprained ankle and a history of a side-slip a couple of days previously, and on examination the case may turn out to be one of tubercular disease. This point is merely referred to here to show the necessity of carefully examining each case of alleged sprain. Every means that the practitioner has at his disposal should be used to exclude any more serious lesion before the diagnosis of a simple sprain is made. The *x*-rays render very useful service, but they are not always at hand, but where any doubt exists as to the possibility of a more serious lesion being present, its existence should be taken for granted and the case treated accordingly. Where direct force has occasioned the injury this is specially important, but in that case a diagnosis can usually be made with care. It is the sprain caused by a wrench or slip, in which the pain of the strained ligamentous tissues overshadows the other symptoms, that the exclusion of fracture or rupture is particularly difficult.

There are some aspects of a sprained ankle which should never be lost sight of. One of these is the possible complications which may result in the shape of tenosynovitis or, in old patients, osteo-arthritis. In many cases a comparatively simple sprain of the ankle, which in another person would have led to no serious result, gives rise to the most obstinate cases of metatarsalgia. The connection between injuries in the ankle region and these indistinct pains which are located in the mid-tarsal region is not very clear, but such results are not very uncommon. In tabetic patients, whose primary lesion may be quite unsuspected, the injury may of course lead to a neuropathic arthritis: so also in a patient with a "tubercular diathesis" the most common cause of a joint lesion appears to be a simple sprain. Serious sprains very often lead to a weakening of the arch of the foot and to a bad condition of flat foot, which later on demands careful attention. Where a wound exists sepsis may occur and induce serious consequences, but this is rare in cases which can be considered as having been primarily simple sprains. Later sequelæ, in the majority of cases due to bad treatment, are limitation of movement at the joint or immobility, and chronic local pain which sometimes proves very obstinate.

(To be continued.)

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

THE EDUCATIONAL INFLUENCE OF SANATORIUM TREATMENT.

By J. E. BULLOCK, M.D.

THE educational influence of a stay in a sanatorium is enormous. I am confident that, as more and more patients, when they exchange sanatorium life for their usual avocations at home or for another sphere of work altogether, continue to carry out the principles and practices learnt during their stay, so more and more will consumption be prevented. Persons while in a sanatorium learn not only how to arrest the disease in themselves, but how to detect the possibilities of its existence in others; and not only so, but to warn them against that manner of living which they now know to be injurious.

Life in a sanatorium must be an astounding experience to all who enter such an institution for the first time. Although they may have read a good deal on the subject and think they know what to expect, there are many things which they have not up to then fully believed in. An early lesson learnt is that, provided the body is kept quite warm by suitable covering, it matters nothing how cold the respired air is; also that the injurious effect of "damp" depends on the chilling effect it has on the body, and that exposure to a storm of rain is harmless if the body is not allowed to be chilled by damp clothes. Life in a sanatorium is practically life in the open air; the windows are freely open day and night, so as to approximate the conditions to the outside air as much as possible. There is found to be no more "draught" than there is out of doors; the wind may be felt to be blowing from a certain direction, as it always must more or less, but it is recognised that that is not a draught any more than a similar experience out of doors; the remedy applied is the closure of the windows and doors open to the direct current of the wind, if it is too chilling to the surface of the body, and to admit the air from a direction opposite to that of the prevailing wind.

The walls of a sanatorium give stability to the structure, form a protection against excessively bad weather, and enclose the rooms and offices necessary to any dwelling-house. When this is provided for, the rest of the building is entirely open to the air. Twenty-four hours in a sanatorium teaches patients that they can be freely exposed to the air in a manner which they never dreamed of in their own homes, and when once they have learnt this they will not be content to live in the stuffy rooms to which they have been previously accustomed.

In a sanatorium careless expectoration is never seen; those who have any expectoration invariably carry sputum flasks, and use them as required. Smokers also use sputum flasks for ordinary salivation. Seeing that the great means of spread of tuberculosis is by sputum carelessly ejected on to the ground and allowed to dry and disseminate, the lesson learnt, *never* to expectorate except into a sputum flask, must be of enormous advantage to the

community. The general public are being taught *not to spit*, but many disregard this, either from ignorance, indifference, or wilful neglect. The objection which some consumptives and many non-consumptives urge against carrying a sputum-flask is that it would look "strange to others," but it is learnt that the flask need not appear to others at all. With very little practice it can be so used that no one notices it, the flask being readily concealed in the hand or handkerchief, and the sputum noiselessly ejected. Each patient is so impressed with the danger of swallowing sputum, whereby the tubercle bacilli may reach the intestines, that thereafter he will always use his flask, and can generally do so without attracting attention. If he should be compelled to use his handkerchief to receive the sputum, he has been taught to steep the handkerchief at the earliest opportunity in some disinfecting fluid and afterwards to have it boiled. He has learnt that his sputum-flask must be carefully cleansed and disinfected, and that forks, spoons, and cups which have touched his lips must be boiled.

In the matter of diet a most useful education is obtained in a sanatorium. Many consumptives do not know the essentials of food and how to regulate their diet. It is generally taught that they should take a good deal of fatty food. Milk enters largely into the dietary: it may be drunk instead of water or beer at lunch and dinner, in the early morning before breakfast, in the course of the forenoon, and at bedtime; as much as possible of other food is taken, with a good proportion of meat. A sanatorium may take two classes of patients: (1) those in an early stage who are fairly robust, (2) those in whom the disease is advanced and perhaps advancing. Such cases are dieted on different lines. The former are not often suffering from dyspepsia, and they do well on a full diet; the latter are usually more or less dyspeptic and require careful dieting. They are instructed in a proper dietary in a sanatorium.

Again, patients learn to test their condition by a careful observation of their temperature. Each patient has a thermometer which he learns to use properly. A reliable temperature can best be obtained in the rectum. This method is rarely practised by those who have not been instructed in its necessity. The more convenient method by the mouth often registers a degree below the proper temperature. Over-exercise or over-excitement, as factors which raise the temperature, are carefully guarded against in a sanatorium. Though no patient should be repeatedly studying his temperature, the lessons which he learns about its indications can be carefully borne in mind when he returns to his usual mode of life. He has learnt what exercise he should take and what work he can accomplish without undue elevation of temperature. Many young men come to a sanatorium direct from an unsuitable life in towns and in close offices. The opportunities

indicated to them of changing their mode of life in the future are of great advantage. For many it is desirable that they should take up another calling altogether and seek some outdoor occupation, if they are at all suited to it. In a large sanatorium they can gain practice and experience in gardening, the management of poultry and cattle, agriculture, land-surveying, and such like. Since many young men wish to go to the Colonies for the sake of the outdoor life, they can judge during their stay at a sanatorium whether they are at all fitted for it; and, if so, they may try, under medical guidance, the outdoor occupation which seems best suited to their tastes and capabilities. If a patient on leaving a sanatorium is free to choose his place of residence, he has learnt that the best site is a gentle slope towards the south, on a porous soil, with, if possible, rising ground to the back; that his rooms should have a southerly aspect; and that he must provide for a free current of air through his rooms by means of windows (which can be left constantly open) and open doors as required.

As a rule the consumptive patient readily adapts himself to sanatorium life; he is practically never despondent even when everyone else sees that his

condition is hopeless. There are, however, a few exceptional cases in which discontent prevails: the patient is never satisfied with the advice given him. His constant complaint is, "I shall never get better under this kind of treatment." He has enough hopefulness to lead him to talk about getting better, but he has not enough strength of will and purpose to enable him to do so. At length he feels himself going down hill and he gives up the struggle at once. Such a patient derives no benefit from a sanatorium. It may be thought that constant association with others affected with the same disease might tend to encourage a morbid self-inspection, but my experience is that though patients will always discuss their symptoms among themselves, they rarely, if ever, take a depressed view of them. They encourage each other, and any throw-back which a convalescent may meet with acts as a warning to those who are tempted to do too much, and some knowledge of the acute condition in others may deter slight cases from being reckless.

In some instances smoking may be indulged in too freely. Here the patient must make a rule not to smoke until after the mid-day meal, never immediately before the evening meal, and not at all indoors.

PATHOLOGY.

THE INFLUENCE OF DRYING UPON VARIOUS BACTERIA.

THE results of careful and elaborate experiments made by G. G. Buckley on the resistance of some pathogenic micro-organisms to drying are interesting. The varieties used were staphylococcus pyogenes aureus, bacillus coli communis, bacillus typhosus, bacillus diphtheriæ, bacillus pestis, and spirillum cholerae. Of these staphylococcus pyogenes aureus was found to be the most, and spirillum cholerae the least, resistant to drying.

The latter cannot live in a condition of complete dryness. Of the other four, B. coli communis and B. typhosus proved more resistant than the B. diphtheriæ and B. pestis. The remaining conclusions may be quoted verbatim:—

Some organisms live longer in a moist and others in a dry atmosphere. In the first class are the spirillum cholerae and the bacillus coli communis, which live very much longer, and the bacillus typhosus and the bacillus pestis, which live only slightly longer in a moist atmosphere than in a dry one. In the second class are the staphylococcus pyogenes aureus and the bacillus diphtheriæ.

Speaking generally, the absolutely dry atmosphere of the desiccator is less harmful to the bacteria used in these experiments than the partially dry atmosphere of the room. This is possibly due, as has been suggested, to the rapid desiccation of the outer portions of the individual bacilli forming a complete protective coat for each organism. The cholera spirillum is an exception to this rule.

The material infected exerts a considerable influence on the powers of resistance to drying possessed by the different organisms; but this influence is not of the same kind on all bacteria nor under all conditions of dryness or moisture. The longest life was usually reached on plaster and lime-wood. The

single exception was in the case of the bacillus pestis, which was very short-lived on lime-wood, and this was the case in each of ten series of experiments. All the organisms were short-lived on paper. As would be expected from the inability of the emulsion to sink into glass, and its consequent rapid drying, the organisms did not live very long on that material.

The effect of pine-wood was variable, and especially so in the moist chamber, pointing to the fact that some constituent or constituents of the wood were capable of acting injuriously upon the organisms in the presence of moisture. In all cases this variety of wood exercised an adverse influence on the organisms, and this suggests the advisability, from a sanitary standpoint, of the use of pine-wood, as far as possible, in such buildings as hospitals,—and especially hospitals for infectious diseases.

Infection can persist in dry buildings, cloths, etc., for at least the following periods:—

Staphylococcus pyogenes aureus	...	...	for 140 days.
Bacillus diphtheriæ	...	...	" 114 "
Bacillus coli communis	...	...	" 92 "
Bacillus typhosus	...	...	" 91 "
Bacillus pestis	...	...	" 34 "
Spirillum cholerae	...	...	" 12 hours.

These figures represent in each case the longest period during which the organism was found living on any material in the desiccator or in the air of the room.

In the case of certain organisms, infection may persist for even longer periods if the buildings, etc., are damp:—

Bacillus coli communis	...	...	for 168 days.
Bacillus typhosus	...	...	" 119 "
Bacillus pestis	" 45 "
Spirillum cholerae	" 21 "

"THE HOSPITAL" MEDICAL BOOK SUPPLEMENT.—No. XIX.

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MEDICINE.

A SYSTEM OF MEDICINE. Edited by WILLIAM OSLER, M.D., and THOMAS MCCRAE, M.D. Vol. V. Oxford Medical Publications. (London. 1909. Pp. 903. 30s. net.)

This volume is devoted to diseases of the alimentary tract, and persual of it leaves, on the whole, a sense of insufficiency, of much talk and little substance. This observation does not apply so much to the sections dealing with well-defined diseases of the alimentary system, but rather to the descriptions of the many vague disturbances to which it is liable. The difficulties of the subject and our ignorance of it are pretty well brought out in an introductory chapter by Dr. Stockton, the reading of which, if it does not help one much towards definitive conclusions, at least enables one to appreciate the extraordinary complexity of the problems set by anomalies of digestive function. Perhaps the most noteworthy thing in the opening chapter is the writer's adhesion to the belief that astigmatism and eye-strain are prominent causes of gastric atony. We had thought that this creed had died a natural death, but its resuscitation in an authoritative work reflects the cloudy atmosphere which still surrounds digestive disorders. The chapters upon the diseases of the mouth, and upon those of the œsophagus are satisfactory. As much cannot be said for the chapter upon functional diseases of the stomach, from the pen of Dr. Julius Friedenwald. We freely admit the difficulties of the task to which he was asked to address himself; but the verbiage and barrenness of this chapter are simply monumental. We are introduced to no fewer than twenty-four different varieties of mono-symptomatic gastric neuroses, exclusive of "nervous dyspepsia," which holds the field alone as representing the polysymptomatic group. The author has not invented the terms he uses, but has adopted the classification of Boas. It is a pity he did not leave Boas to gloat alone over his gastro-myxorrhœa, his parorexia, and his gastralgokinesis. This chapter is undoubtedly a blot on the book. The chapter on gastric and duodenal ulcer is better, but much too long, and replete with useless information. In Professor Osler's justly popular text-book upon the principles and practice of medicine the consideration of gastric and duodenal ulcer occupies rather more than eight pages. The corresponding section in this volume runs to close upon fifty pages, and has gained practically nothing by the excess. The total loss to the reader is therefore considerable. The remaining items in this chapter are on the whole satisfactory, though not clearly arranged. The chapter on diseases of the intestines is satisfactory, and that dealing with the peritoneum is good. The latter is written by Dr. H. D. Rolleston, and is much nearer the style of writing which one has a right to expect in an important system of medicine. We may be charged with insular bias, but it is an undoubted relief to escape in this chapter from the windy and re-

dundant writing which characterises the earlier parts of the book. Dr. Eugene Opie's chapter on the diseases of the pancreas is decidedly good, being clear and concise, and the same may be said of Dr. Kelly's chapter upon diseases of the liver and gall-bladder. The book as a whole improves towards the end and contains some really good work. It would be twice as valuable if it were half as long.

AIDS TO MEDICINE. By BERNARD HUDSON, M.D., M.R.C.P. (London: Baillière, Tindall, and Cox. 1909. Pp. 252. Cloth, 3s. net. Paper, 2s. 6d. net.)

THE great objection to all potted text-books is that they aim avowedly and necessarily at being mere examination cram-books. Still, as long as students expect to be crammed for examinations—indeed, demand it—the supply is certain to be met somehow; and from that point of view a good cram-book is better than a bad one. But the education of medical students should be such as to eliminate the desire for cramming, and their examinations should be conducted so as to detect it and reject its devotees. Dr. Hudson's book is very much what one might expect any intelligent student to produce in the process of abstracting his text-books or taking notes of an unusually good course of lectures. We are willing to believe that it is a favourable specimen of its class, but the fact remains that the conditions are a handicap which has been too severe for the author. We can recognise that the necessity for short, dogmatic sentences precludes adequate discussion of many points; but surely that is a reason against, rather than in favour of, the reserve which expressed in the statements that "a spirochæte has lately been described" which may be the cause of syphilis, and that sleeping sickness is "probably caused by a trypanosome." Without having examined the work at all exhaustively, we have chanced on many assertions with which we cannot agree. Thus in the first three pages we find enteric fever described as a disease of temperate climates, and its conveyance aerially as commoner than by fomites; the blood omitted in the list of places where the bacilli may be found; and a distinction drawn between enteric fever and typhoid fever, the latter being described as the result of invasion of the lungs or meninges by the specific micro-organism. Worst of all is the unqualified statement that the rash "keeps coming out in crops throughout the whole course of the disease." Among the causes of death of the subjects of tabes dorsalis, ascending urinary sepsis is not mentioned at all, nor is optic atrophy given among the symptoms of disseminated sclerosis. As causes of chlorosis, "copræmia" and "toxic absorption from the intestine due to constipation" are apparently regarded as two different things, and both are discarded in favour of an "explanation" which is a mere empty form of words explaining nothing.

SURGERY.

APPENDICITIS AND OTHER DISEASES OF THE VERMIFORM APPENDIX. By HOWARD A. KELLY, M.D. (Philadelphia and London: J. B. Lippincott Co. 1909. Pp. 502. Price 25s. net.)

FOUR years ago Dr. Kelly published, in conjunction with Dr. Hurdon, a monograph upon appendicitis which surpassed everything which has hitherto appeared on this subject, not only in magnitude (for it contained some 320 pages), but in the profusion of its illustrations and their artistic merits, and in the complete and exhaustive consideration allotted to every aspect of this disease. The present new edition has been prepared by Dr. Kelly to meet the daily needs of the great army of general surgeons who yet do not require a work quite so encyclopædic as the original. It is natural, therefore, that the second edition should bear especially on the practical side of the problems which are under consideration, and be curtailed somewhat in other directions.

Throughout the work the difficulties of the practitioner who is confronted with a doubtful case of right-sided abdominal pain are carefully kept in mind, and the indications for treatment, operative and non-operative, are dealt with in an eminently sound and common-sense spirit. Dr. Kelly is totally opposed to the purgative treatment of any patient who may possibly be harbouring an inflamed appendix: his views on this and other points are pithily summed up in nineteen "aphorisms for the general practitioner." There is, we imagine, no point connected directly or indirectly with appendicitis which has escaped Dr. Kelly's notice. Thus he discusses the question whether (1) a healthy or (2) an adherent appendix should be removed when laparotomy is done for some other condition. He pronounces against it in the first case and in favour of it in the second, provided the additional time required does not prejudice the patient's condition. The very complete references to authors and the imposing index of them are valuable features of the book: the most notable omission in this respect is the entire neglect of the work of Head and other British authors on referred pains, and Sherren's areas of hyperæsthesia in this disease. A single, somewhat contemptuous, sentence alluding to a Continental author represents the whole of the information on this subject to be derived from Dr. Kelly's text-book. The illustrations remain as in the first edition, unrivalled.

A SYSTEM OF OPERATIVE SURGERY. By various authors. Edited by F. F. BURGHARD, M.S.(Lond.), F.R.C.S. (Eng.), Surgeon to King's College Hospital; Senior Surgeon to the Children's Hospital, Paddington Green. In four volumes. Vol. I. Pp. xxvi+751. (London: Henry Frowde, and Hodder and Stoughton.)

THE volume under consideration is the first of four issued by the Oxford Medical Publications, and if the standard set in it is maintained the series should form a valuable addition to medical literature. The volume opens with an instructive and thoughtful article on "The Principles and Technique of Wound Treatment," by Mr. Lockwood. The trend of modern surgical opinion is shown by the assumption that rubber gloves are worn by the surgeon for all operations, an assumption that we are glad to see. The relative merits of asepsis and antiseptics are discussed. A complete account of the methods of local analgesia is supplied by Captain Houghton, R.A.M.C. We are not convinced that there is a wide field of usefulness for this method or that its future is by any means assured; nor do we believe that it is ever likely to displace general anaesthesia as a routine method. But in view of the fact that it is being extensively tried, this

detailed account of the technique is especially welcome. The articles on amputations and the operations for the ligature of arteries are from the pen of the chief editor, and we have nothing but admiration for them. The illustrations are particularly good, and a useful innovation, which we do not remember to have seen elsewhere, is the introduction of diagrams showing how an operation ought *not* to be performed. But these two items are in our opinion the dullest part of operative surgery; for as often as not one has to amputate *secundum artem* and not on the lines of a set operation, while the formal operation for the ligature of an artery is quite rarely performed. There is an article on arteriorrhaphy, also by Mr. Burghard, with a special description of endo-aneurysmorrhaphy, also called "Matas' operation." The criticism that we have to make of the procedure is that the operation is difficult and involves a complicated technique, and considering the freedom with which a collateral anastomosis is opened up after ligature of peripheral vessels we hardly consider it necessary. But, as Mr. Burghard points out, "it is in connection with the treatment of aneurysm of the aorta and its main branches that this operation bids fair to be of the greatest importance in the immediate future." There is appended a table of the results of 85 cases of this operation published up to June 1, 1908.

The latter part of the present volume is occupied by a series of articles mainly concerned with the plastic surgery of the nerves, muscles, and tendons, by Mr. Burghard, and one on plastic surgery proper by Mr. Legg. In addition to this, two sections are devoted to the operations for non-tuberculous affections of the bones and of the joints. At first sight this seems curious, but on consideration one appreciates that the surgery of tuberculous bone lesions is so much a separate entity that the editor has been well advised in this respect. As a whole the book gives a frank and lucid description of the manner in which the various operations should be performed and an honest appreciation of their merits, and it is essentially up-to-date. It is not such a mine of information as is Mr. Jacobson's publication on "The Operations of Surgery," but it is much more readable.

MASSAGE IN RECENT FRACTURES AND OTHER COMMON SURGICAL INJURIES. By SIR W. H. BENNETT, K.C.V.O., F.R.C.S. (London: Longmans, Green and Co. Fourth Edition, 1909. Price, 6s.)

THE present edition of a book which ran rapidly through three editions about the beginning of the century contains two new lectures on Sprains and their consequences and on Rigidity of the Spine, while that upon Internal Derangements of the Knee-joint has been omitted; the latter subject the author has more fully discussed in his recent work on injuries and diseases of the knee. In these two chapters the conclusions expressed and the treatment outlined are characterised by the same sound common sense which pervades the original editions. Since the first publication of Sir William's lectures in 1900 the attitude of the profession at large towards injuries of bones and joints has undergone very profound change, partly owing to the influence of his teachings. The procedures he advocates are now no longer unfamiliar, but are widely approved and taught to students by surgeons of special experience in such lesions, and in text-books. At the same time neither the expert nor the novice will find that he has nothing more to learn about massage and movements, and those who have not read Sir W. H. Bennett's monograph may be advised to get the fourth edition and study it at once.

PAEDIATRICS.

COMMON DISORDERS AND DISEASES OF CHILDHOOD. By G. F. STILL, M.D. (London: Henry Frowde, and Hodder and Stoughton. 1909. Pp. 731, forty figures and charts. Price 15s. net.)

THIS is another of the Oxford Medical Publications, and, as usual, lacks nothing in style of printing, type, and binding. The author has not been well advised in the choice of a name for his work. The title suggests that only common disorders are included, and that most of these will be considered. Yet a few infrequent diseases are discussed, and many of everyday occurrence absolutely ignored. The most notable omissions are the specific fevers, diphtheria, tonsillar affections, adenoids, whooping-cough, anæmia, purpura, and common skin rashes. Some of these are referred to incidentally in the consideration of other complaints. The style of writing may be described as intermediate between that of a clinical lecture and a textbook. Apparently many of the chapters are clinical addresses modified by the inclusion of a *résumé* and analysis of the author's notes of cases bearing reference to the particular subject. Consequently some of them are very pleasant reading, provided a judicious skipping of the statistical factors is adopted. Unfortunately this style leads to great inequalities in the apportionment of space to matter. Some of the chapters are devoted to diseases, others to symptoms. Those on curd-indigestion, common faults and fallacies in infant feeding, flatulence and colic, indigestion in children past the age of infancy, and bilious attacks, are excellent, in spite of the considerable amount of repetition rendered necessary by this arrangement of the subject-matter. Referring to

special points, there are certain omissions, and statements which are insufficiently supported by evidence. Rickets is ascribed to deficiency of fat in the diet, but there is no comment on Findlay's experiments, showing that rickets cannot be produced in animals by diet apart from confinement. Anæmia is stated to be a manifestation of rickets, although there are no special blood changes. Almost certainly it may be due to a diet which causes rickets without being a symptom of it. Much stress is laid on the frequency and importance of "mucous disease," more than most authorities are disposed to admit it deserves. The dietetic treatment of constipation is objected to because it may cause dyspepsia. So it may, in bad cases, but experience shows that simple dietetic measures cure many cases without any recourse to drugs. One is astonished at the scanty space allotted to appendicitis, and one would have liked to have the writer's views on the treatment of hernia by medical measures. Throughout the book considerable space has been devoted to prognosis and treatment. The work will add to the writer's reputation as having a wide experience in the various diseases of children and a thorough knowledge of this branch of medicine. One grave defect, pardonable in a younger writer, is the wearisome reiteration of the egoistical pronoun, hardly compensated for by the apology in the preface for its frequent use, and not rendered forgivable by a generous appreciation of the work of other physicians. Advantageous as the opinion of an individual may be, it carries much more weight with his fellows when it is supported by evidence or the authority of other well-known writers.

EUGENICS AND HEREDITY.

THE SCOPE AND IMPORTANCE TO THE STATE OF THE SCIENCE OF NATIONAL EUGENICS. By KARL PEARSON, F.R.S. Second Edition. (London: Dulau and Co. Pp. 45. Price 1s. net.)

THIS lecture, which was originally delivered at Oxford as the Robert Boyle lecture in May, 1907, is now re-issued as the first of a series dealing with the problems of eugenics. With the object and aspirations of Professor Pearson we are in cordial sympathy. He endeavours to point out that before any drastic changes are made in the economical administration of the country, it is highly important for statesmen to have a sound knowledge of the fundamental problems of sociology, which, he thinks, can only be obtained by the methods pursued in the Eugenics Laboratory. By numerous "genealogies" and diagrams, Professor Pearson illustrates his views on the inheritance of ability and of diathesis to disease. He considers first the inheritance of physical characters, which can be measured with considerable accuracy. From this he discusses disease, and then passes to an investigation of the inheritance of psychical characters. Lastly, he treats of the question of birth rate and fertility. If we cannot exactly agree with Professor Pearson's philosophical theory of the stages through which a science passes, we nevertheless realise that the work he is doing, as indicated in this volume, should be valuable for a clear comprehension of general tendencies in the progress of the nation. If no answer is given to the question How, facts are at any rate, presented with accuracy and insight, and the conclusions drawn from them are expressed with moderation. If the present workers at the Eugenics Laboratory do not see the fruit of their labours, their carefully collected records will at any rate be useful material for future generations.

A FIRST STUDY OF THE INHERITANCE OF VISION AND OF THE RELATIVE INFLUENCE OF HEREDITY AND ENVIRONMENT ON SIGHT. By Amy Barrington and Karl Pearson, F.R.S. Being No. V. of Eugenics Laboratory Memoirs. (London: Dulau and Co. Pp. 61. Price 4s.)

THE authors are happily aware of the real difficulties in the path of the investigator in this field. The difficulty of finding a specialist in ophthalmology who has statistical training, or a statistician who is an eye specialist must, as they admit, detract from the value of this work, as a basis from which general laws may be deduced. Hence this simply a first study. The conclusions at which the authors arrive are the following: (i) No evidence whatever that over-crowded, poverty-stricken homes, or physically ill-conditioned or immoral parentages are *markedly* detrimental to the children's eyesight. (ii) No sufficient or definite evidence that school environment has a deleterious effect on the eyesight of children. (iii) Ample evidence that refraction and keenness of vision are inherited characters, and that the degree of correlation between the eyesight of pairs of relatives is of a wholly different order to the correlation of eyesight with home-environment. (iv) Sufficient evidence to show that intelligence as judged by the teacher is correlated with vision in a moderate manner. These conclusions are therefore either tentative or negative, and their value will be realised only when further investigations have been completed. There can, however, be no two opinions about the utility of such work, providing that it is carried out in that spirit of sanity and moderation which has hitherto marked these publications. Professor Pearson is to be congratulated on this pioneer attempt in a very difficult field of research.

MISCELLANEOUS ITEMS.

THE NATURAL HISTORY OF CANCER. By W. ROGER WILLIAMS, F.R.C.S. (London: Heinemann. Pp. 519. Price £1 ls. net.)

WHEN the reader puts down this book he will say to himself "I suspect Mr. Williams is a cynic." If the author was in ironic mood when he offered this work to the medical public, he was a little untender to our deficiencies. So able a man must have been able to see through his own production; he must have said to himself "Let us see how much they will swallow." Here is a monument of industry; a laborious compilation, at once amusing and refreshingly acerbic; a book that might have been both readable and valuable, hopelessly spoiled by a concatenation of statistical pitfalls and dogmatic assertions. An indication of the nicety of some of the propositions he is anxious to prove may be gathered from the following quotation: "From the foregoing considerations, it appears as if predisposition to insanity, like predisposition to tubercle—with which, indeed, it is often allied—gives proclivity to cancer, although developed insanity—like active tuberculous disease—seldom coexists with cancerous lesions." The author betrays such critical acumen in dealing with tables and statistics of others that we suppose it is only the enormous mass of material he has collected which has precluded perfect digestion, and as a consequence permitted several instances of incompatible statements in adjacent paragraphs. One cannot think much of a table of percentages—of ovarian neoplasms, for example—which is classified under the headings "Epithelioma," "Sarcoma," "Non-malignant neoplasms," and "Cysts." It would serve no useful purpose to multiply such instances, though it could easily be done. It really is not easy to ascertain exactly what was Mr. Williams' intention, or how he thinks he has advanced the cancer problem. It is well known to every thinking clinician that solution is not to be expected from those who cannot tear their eyes from the top of a microscope; we are all anxious for means of orientation amidst the wide seas of speculation and controversy, and in so far as this book compels the reader to a proper appreciation of perspective it deserves every commendation. But we think the proof-sheets were corrected with a grim smile.

HEALTH, MORALS AND LONGEVITY. By GEORGE GRESSWELL and ALBERT GRESSWELL. Pp. 226. (Bristol: John Wright and Sons. Price 5s. net.)

It is always painful to speak slightly of an honest effort to advance the sum of human welfare, and this book puts a reviewer in an unpleasant position. For excellence of intention cries aloud from every one of its closely written pages, but, alas! is out-shouted by inefficiency of execution, which is more vocal still. Much labour has been spent, and the outcome is 226 pages of rambling, discursive platitudinous sermonising. Candour compels the critic to confess that the only part of the book which really interested him is the section devoted to premature burial. Of this accident the authors clearly entertain the most lively apprehension, and one (on the evidence presented) disproportionate to the need. Throwing sense of humour to the winds, they are beguiled into the following expression of opinion: "On the whole, perhaps, the complete severing of the head from the trunk would be the best preventive of live sepulture, bodies being decapitated *before the lid is screwed down*." The italics are our own. This atmosphere of ingenuousness pervades the whole volume, and disarms the criticism of a kind-hearted person. We feel that the authors are doubtless doing more to advance the

happiness of their kind by the example of their lives than they are ever likely to accomplish by their pens. Considering how much better example is than precept, one cannot help regretting that they have strayed into the latter field, for they are not at home in it and are wasting their time there.

CHAVASSE'S ADVICE TO A WIFE. Fifteenth edition. Revised by G. DRUMMOND ROBINSON, M.D., F.R.C.P. (London: J. and A. Churchill. Pp. 360. Price 2s. 6d. net.)

THAT "Advice to a Wife" has reached the fifteenth edition points to it being a popular book with lay people, to whom no doubt its redundancy, sentimentality, and repetition are attractive rather than the reverse. A great part of it obviously belongs to the days of long ago, when young ladies languished upon sofas, dreaded fresh air, and were ashamed of healthy appetites; whilst young wives considered nourishing stout a necessary accompaniment of pregnancy and nursing. Apparently in those days sherry and other wines to the extent of two glasses per meal were considered by no means superfluous. The introductory chapter (100 pages) is an anachronism, for in these days exercise, fresh air, and an infinitesimal amount of alcohol are the rule rather than the exception among young women. The chapter on pregnancy is clear and contains much useful information, and we note with approval that rest during the daytime is, though somewhat reluctantly, advised as being good for pregnant women. We disagree with the application of spirit to the nipple, and appreciate the more modern suggestion of lanoline or colourless vaseline for the purpose. We are interested to see doubt cast upon the absolute necessity of a binder to preserve the figure. The facts referring to antiseptics, etc., point to the hand of the up-to-date editor, and as they concern the nurse and doctor rather than the patient are treated with a brevity which might be an improvement in other parts of the book. The rest of the work calls for little comment. It consists chiefly of practical common sense, and we can understand it being a comforting, useful, and practical addition to the library of a newly married couple.

ARCHIVES OF THE MIDDLESEX HOSPITAL. Clinical Series No. I. (being the fourteenth volume of the Archives). Edited by W. SAMPSON HANDLEY and VICTOR BONNEY. (London: Macmillan and Co. 1909.)

THIS publication constitutes a new departure in the Archives of the Middlesex Hospital, and we look forward to seeing a continuance of this clinical series. In the present issue of 102 pages there are seven papers by members of the staff and four reports by the various registrars. Mr. Pearce Gould contributes four interesting surgical cases; Mr. Bland Sutton gives an account of a case of a parathyroid tumour; Dr. Voelcker contributes a most useful clinical lecture on the significance of dulness in the chest in children. Dr. Wethered describes the graduated labour treatment of pulmonary tuberculosis; Dr. H. Campbell Thompson gives an account of cases illustrating the localisation of cerebral tumours, such as those of the pituitary body with acromegaly, those in the cerebellum, pons, motor cortex, and uncinat gyrus. Mr. Nowell describes some simple effects arising as the result of the presence in the mouth of irritated, dying or dead tooth-pulps; and Mr. Gordon Taylor records a fatal case of perforated gastric ulcer with secondary jejunostomy. All these papers are crisp and short, so that the gist of each is quickly and readily ascertained by the reader.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

HOSPITAL SUNDAY AND SOME CRITICS.

THE PRESSING NECESSITY FOR INDIVIDUAL SELF-RELIANCE.

WE desire to congratulate the Secretary, Sir Edmund Hay Currie, on the improved system of advertising this Fund which has marked the organisation in connection with Hospital Sunday, 1909. The metropolitan press, too, has taken a more active interest in the matter this year than usual, though there is still much to desire in this respect. After all, the editors of the London newspapers are Londoners; it is their especial privilege to act as leaders of public opinion; and it is not too much to expect that, although the London editors have to survey the whole Empire and world, and that in mid-June they are overdone with "copy" of all kinds, still they might and ought to devote space in a prominent position, once a year during the six days immediately preceding Hospital Sunday, in order to focus public sentiment and opinion in favour of the voluntary hospital system. Seeing that the Conference of the representatives of the press throughout the Empire has been so marked a success, would it not be desirable to have a conference of the metropolitan editors in regard to this question, and so to come to some definite and purposeful arrangement whereby the needs and claims of the whole of the hospitals of the metropolis may be adequately dealt with in the columns of the London press each year in connection with the Hospital Sunday Fund collections? The present claims to be a progressive age, and we throw out this suggestion in the hope that it may find general acceptance and lead to practical results.

We are glad to see that the clergy and ministers of religion are adopting in greater numbers the "golden pheasant" circular, in the form of a special letter addressed to individual members of their congregations, asking them, whether they are in town or not, to remember Hospital Sunday and send some contribution to the collection in accordance with their means. One such letter is before us as we write, and in it the vicar of a West End parish points out that through the agency of this Fund an incalculable amount of suffering is saved the community, and that thousands are now working and maintaining themselves and their families who, but for the help they have received through the instrumentality of the Hospital Sunday Fund, might have become invalided and entirely dependent upon charity or the Poor Law. In this connection it may be well to re-state the marvellous fact that, owing to the improved conditions in treatment and practice in the metropolitan hospitals at the present time, at least one million days every year are added to the earning power of the working classes through the diminished period of residence in the hospitals now-a-days compared with what it was a quarter of a century ago.

Reverting to the press and the writers on hospital subjects, we may perhaps urge that when a large

sum is needed for a public purpose, criticism is not called for, seeing that the aim, if the writer is sincere in wishing to help, is at the moment to secure cash for the support of the hospitals. In the present year some of the criticism, which shows a socialistic bent, is neither convincing nor logical. One writer in the *Daily News*, for example, argues that, as an enormous amount of disease is preventable, the whole of the hospital system ought to be placed under the direction of the medical officers of health throughout the country and paid for by the municipality or County Council. If this were done, it is contended, the responsibility of treating the patients being placed upon the public health authorities, the tendency would be to make these gentlemen infinitely more keen than they are at present to eradicate bad housing and overcrowding, and to disperse the existing ignorance and neglect which promote a bad industrial condition.

It is not quite the time to ask the public to consent to have a million or two pounds added to the sum which they have already to provide in London each year through the rates. Indeed, the proposal displays a lack of apprehension of the facts, and of the requirements of the medical service in regard to the treatment of disease in hospitals, which is a little remarkable in the present day. Again the writer, in support of his argument, dwells upon the recent action of the Council of Newcastle-upon-Tyne in dismissing its staff of women sanitary inspectors and health visitors, who have been most efficient servants, on the ground of the cost entailed. The saving in expense by the action of the Newcastle Council cannot exceed a few hundreds a year, but, whilst it exhibits the unwisdom of spasmodic attempts at economy in municipal affairs, it certainly gives no encouragement to the claim of the *Daily News* that the whole cost of maintaining the hospitals should be provided by the municipality.

Some people have an idea that everything should be provided for them out of the taxes and rates. This present-day spirit is one of unadulterated degeneracy. England has become the great nation she undoubtedly is through the thrift and self-reliance of her people. To-day thrift and self-reliance are unpopular. Unless responsible statesmen intervene, the time is not far distant when an attempt may be made, not only to put the whole of the hospitals on the rates, but to provide everybody having less, say, than £100 a year with food, clothing, education, housing, and holidays. Whenever the shoe of necessity pinches the foot of a certain kind of person, whose numbers are steadily growing, his first impulse, instead of taking the shoe off himself and finding a remedy, is to start a grievance, because the State has not foreseen his discomfort and provided for him against it.

We have thought it well in these days of discouragement for voluntary hospital managers, whose difficulties have been immensely increased by the present Budget proposals, to call attention to the trend of individual opinion in matters of State interference, that they may use their influence in the direction of the inculcation of thrift and self-reliance on the part of the individual citizen. Be this as it may, there now exists a very general feeling of alarm and dissatisfaction in the minds of the most thoughtful and responsible residents in these

islands which is quite apart from politics. The spirit of self-reliant individualism has been the very bulwark of our national prosperity in the past. When nurses, who are not by any means the best paid of women workers, have shown that they are capable in eighteen years of putting by, out of their relatively small earnings, for old-age and sickness provision and savings, a sum of something like two millions sterling; a national policy of old-age pensions, not resting on a thrift basis, certainly seems a step in the wrong direction.

QUEEN VICTORIA'S JUBILEE INSTITUTE FOR NURSES.

By D. F. PENNANT, Honorary Secretary.

My attention has been drawn, I am afraid rather late in the day, to the article on "Nursing Administration" in *THE HOSPITAL* of May 15. The Council of the Queen's Institute always welcomes criticisms of its work, particularly when they proceed from a periodical of the high standing of *THE HOSPITAL*, and is always grateful for any assistance in bringing before the public notice the essential difficulties which exist in successfully promoting the nursing of the sick poor in their own homes. But as the article in question, in some respects, seems calculated to create a wrong impression of the actual condition of the Institute's work, perhaps you will allow me shortly to explain exactly how matters stand.

Under the Charter incorporating the Institute, there is committed to it "the promotion and provision of improved means for nursing the sick poor." With so vast a field of work it must always be obvious that at any given time the Institute can only select the more urgent or more important methods of carrying out its mission which present themselves, and that it must always leave aside much useful work which would conduce to the improvement of the nursing of the sick poor. In this sense, but in this sense only, is the Institute always "in difficulties," unable, that is, to carry out all the work which it would wish. In any other sense, the record of the year 1908 is a record of difficulties overcome, and there is, in truth, no ground whatever for depression in connection with the Institute's work. More money indeed is always needed, for district nursing is spreading fast, and the demands made on the Institute for advice and assistance grow even faster. But the work accomplished is scarcely done justice to in your article. It is fair to say that it has been difficult to give the figures as to the nurses so as to make them clear to those who are not already familiar with the method of training Queen's Nurses.

The facts are these:

Every Queen's nurse, in addition to three years' hospital training, is given at least six months, not a year's, training in district work—in 1908 there were 174 so trained at the expense of the Institute and its Scottish branch in large homes; the seven who for special reasons received hospital training, and the thirty who received training in midwifery, must also have been trained in district work before becoming Queen's nurses. In addition to these, 67 received the necessary district training to qualify them as Queen's nurses from homes of sufficient size to enable them to train, for use on their own staffs, making in all 241 added to the Roll of Queen's nurses during the year. The year 1909 should show an increase in the number of nurses trained both at the expense of the Institute and by homes for their own staff.

There is now no shortage of vacancies in the training

centres, and the number of nurses in training is being increased as fast as the supply of hospital trained nurses will allow.

The requirements of the large training homes necessitate a constant succession of nurses being sent to them for training throughout the year, and this makes it more difficult to secure the number of nurses required, than would be the case if they all commenced training at stated times.

Again, with few exceptions, the affiliated nursing homes in the provinces which employ a Superintendent and not less than five nurses, are now training as Queen's Nurses all the nurses they require for their own use. The number of nurses, then, wanted to train as Queen's Nurses is rapidly increasing. Miss Nightingale has said that it is the best nurses who are wanted for work among the poor. Who will help us to get more to come forward?

It is, of course, true that the necessity for training so many nurses is due to the large number of resignations, but the writer of the article has not quite appreciated the figures. There were in 1908, 203 resignations. But there were 241, not 211 nurses trained, and to these, to make a fair comparison, must be added 33 who rejoined, having resigned in previous years, a total of 274, or 71 more than the resignations.

Then, of the nurses resigned, in the case of a certain number, the resignations are only temporary, due to breakdown in health; securing of a post under an Association which ultimately affiliates to the Institute, and other like causes. But the great loss of nurses is due to marriage. Marriage ends the nurse's career for the time being.

One word as to the cost of inspection. It is only Queen's Nurses who are inspected by the Institute's inspectors, and of these only those in the country districts are midwives. There is then no room for a combination of the office of inspector of midwives under a County Council with that of the Institute's inspector of Queen's Nurses, who covers an area commensurate with several counties. It is the Superintendents of the County Nursing Associations who naturally combine their functions with those of official Inspector of Midwives, and the Institute has always urged that wherever possible, this should be arranged.

THE Prince of Wales, on the occasion of his visit to Mid-somer Norton, Somerset, on June 23, will present the Honorary Associate's badge of the Order of St. John of Jerusalem in England, of which he is Grand Prior, to Dr. Worger, of Radstock, and the Society's vellum certificate to Mr. Lloyd Harvey, of Radstock, for services rendered by them for ten years to the cause of first aid to the injured.

NEWS AND COMING EVENTS.

PROFESSOR JOHN CLELAND intimated by letter to the Court of the University of Glasgow on June 10 his intention of resigning the Chair of Anatomy, which he has held since 1877.

THE Cavendish lecture of the West London Medico-Chirurgical Society will be delivered this year on the subject of "The Cerebellum" by Sir Victor Horsley, F.R.S., F.R.C.S., on Friday, June 25, at 8 P.M., at the Kensington Town Hall. The lecture will be followed by a conversatione.

AN extraordinary general meeting of the London and Counties' Medical Protection Society will be held on June 23 at 3.30 P.M. at the offices of the Society, 31 Craven Street, Strand, W.C., for the purpose of considering certain alterations in the articles of association. This will be followed immediately by the annual general meeting of the Society at 4 P.M.

THE League of Mercy announces that the Comptroller of H.R.H. the Prince of Wales's Household has issued invitations in the name of T.R.H. the Prince and Princess of Wales, Grand President and Lady Grand President of the League of Mercy, to a reception at Marlborough House on Wednesday, July 7, at four o'clock. If wet the garden reception will not take place.

THE conference on the Medical Inspection and Treatment of School Children, under the auspices of the Incorporated Institute of Hygiene, with Sir William Bennett, K.C.V.O., F.R.C.S., in the chair, will commence on Monday June 21, at 4.30 P.M., at 34 Devonshire Street, Harley Street, London, W.

THE Medical School of St. Thomas's Hospital will hold its annual prize-giving on Friday, June 25, at 3 P.M. The prizes will be distributed to the students by the Rt. Hon. Alfred Lyttelton, K.C., M.P., in the Governors' Hall, and the ceremony will be followed by tea and music on the terrace.

THE Council of the Royal Institute of Public Health have awarded the Harben Gold Medal for eminent services to the public health, which they are empowered to do triennially, to his Excellency Professor E. von Behring, M.D., Marburg, Germany, and have appointed Brevet Lieut.-Colonel W. E. Leishman, M.B., R.A.M.C., Professor of Pathology, Royal Army Medical College, the Harben Lecturer for the year 1910, and Professor Angelo Celli, M.D., Rome, the Harben Lecturer for the year 1911. The Harben Lectures for 1909 will be delivered by Professor R. Pfeiffer, M.D., Breslau, in the Lecture Room of the Institute on Monday, June 21, Wednesday, June 23, and Friday, June 25, at 6 P.M.

THE RESEARCH DEFENCE SOCIETY will hold its annual general meeting of members on Friday, June 25, at the house of the Royal Society of Medicine, 20 Hanover Square, W., at five o'clock, to receive the Committee's report, to confirm the provisional rules, and to transact necessary business. The Earl of Cromer, President, will take the chair and give an address. Other speakers will be Sir James Dewar, Sir Arthur Conan Doyle, the Hon. Walter Guinness, and Professor Starling. The Society has now 2,450 members and 70 associates, and has recently received a legacy of £1,000. The Committee especially wish to make arrangements for more addresses and lantern lectures in various part of the country during the winter. All com-

munications should be addressed to Mr. Stephen Paget, Hon. Secretary, 70 Harley Street, London, W. Telephone: 975 Paddington.

ON June 14 Sir Alfred Jones, chairman of the Liverpool School of Tropical Medicine, entertained at dinner in the University Club, Liverpool, twelve members of the school lately returned from scientific expeditions in the tropics. The guests of honour were Professor Ronald Ross, Sir Rubert Boyce, Dr. H. Wolferstan Thomas, Dr. A. Breinl, Professor J. L. Todd, Dr. J. O. W. Barratt, Dr. Warrington Yorke, Dr. A. Kinghorn, Mr. R. E. Montgomery, Mr. R. Newstead, Dr. W. T. Prout, and Dr. A. H. Hanley. The host, in proposing the health of the members of the expeditions, offered on behalf of Liverpool and the Empire generally congratulations and welcome to the members of the various expeditions, who represent not only Great Britain, but other countries, especially Canada. Sir Alfred Jones emphasised the international character of the crusade against tropical diseases, and pointed out with pride that other countries have followed Liverpool's example.

MR. C. B. LOCKWOOD, of St. Bartholomew's Hospital, occupied the chair at a special meeting of the Motor Union Committee of Medical-Motorists held at the offices of the Union, 1 Albemarle Street, Piccadilly, London, W., to consider the Budget proposals of the Chancellor of the Exchequer in so far as they affect members of the medical profession using motor-cars. There was a representative attendance of medical men, members having travelled from the North and West of England in order to be present at the meeting. The committee resolved that the motor-car has now become an absolute necessity to a medical practitioner, who is therefore entitled to make a special claim for abatement. It was resolved to approach the Chancellor of the Exchequer with a view to securing a rebate of 1d. per gallon on petrol used by medical men. A letter was read from Mr. W. Joynson-Hicks, M.P. (Chairman of the Motor Union), stating that the Chancellor had agreed to receive a deputation on the matter.

ROYAL COLLEGE OF SURGEONS.

AT the last ordinary meeting of the Council of the Royal College of Surgeons of England, held at the College under the chairmanship of Mr. Henry Morris, the President, thirty members of the College, who have recently passed the examinations and conformed to the by-laws, were admitted to the Fellowship of the College; while three candidates, not members of the College, were also admitted Fellows. Following a recommendation from the Committee appointed to consider the subject of instruction in anaesthetics for dental students, the Council determined that all candidates for the licence in dental surgery of the College entering after October 1, 1909, at a recognised dental hospital or school, must produce a certificate "of having attended at a recognised dental hospital and school a course of practical instruction in the administration of such anaesthetics as are in common use in dental surgery."

EDITOR'S LETTER-BOX.

ANSWERS TO CORRESPONDENTS.

"TABETIC" (Darlington).—One of the most complete monographs upon *tabes dorsalis* (locomotor ataxy) is published by Dr. Byrom Bramwell in his "Clinical Studies," Vol. VI., 1908. The publishers are Messrs. R. and R. Clark, Ltd., Edinburgh.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, JUNE 21 to JUNE 26.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich, S.E.

At 2.15 p.m.

June 23, Dr. F. Taylor, Relapsing Fever.

At 3.15 p.m.

June 25, Mr. McGavin, Congenital Malposition of the Testis.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

June 21 and 24, Surgical Registrar, Demonstration.

June 25, Medical Registrar, Demonstration.

At 12 noon.

June 21, Dr. Bernstein, Demonstration.

At 12.15 p.m.

June 22, Dr. Pritchard, Practical Medicine.

June 23 and 26, Dr. Grainger Stewart, Practical Medicine.

At 5 p.m.

June 21, Mr. Bidwell, Practical Surgery.

June 22, Mr. Bidwell, Surgical Treatment of Acute General Peritonitis.

June 23, Dr. Beddard, Medicine—V.

June 24, Dr. Cole, The Insane and the Law.

June 25, Mr. Lloyd, Anæsthetics.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

June 21, Dr. J. J. Pringle, Skin.

June 22, Dr. Harry Campbell, Medical.

June 23, Mr. Lockhart Mummery, Surgical.

June 24, Sir Jonathan Hutchinson, Surgical.

June 25, Dr. St. Clair Thomson, Ear, Nose, and Throat.

At 5.15 p.m.

June 21, Dr. Harry Campbell, Treatment of Asthma.

June 22, Dr. T. D. Lister, Infantile Scourvy.

June 23, Dr. A. E. Giles, The Diagnosis of Pelvic Tumours.

June 24, Dr. Theo. Hyslop, Paralysis and Insanity.

NORTH-EAST LONDON POST-GRADUATE COL- LEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

June 22, Dr. J. E. Squire, Demonstration (at the Northwood Sanatorium).

June 24, Dr. A. J. Whiting, Demonstration of Medical Cases.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.

At 3.45 p.m.

June 22, Mr. Stuart Low, The Accessory Sinuses.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

June 22, Dr. T. Grainger Stewart, Nervous Manifestations at the Menopause.

June 25, Dr. T. Grainger Stewart, Spinal Tumors.

THE THROAT HOSPITAL, Golden Square, W.

At 5.30 p.m.

June 21, Mr. Rose, Intracranial Complications of Ear Disease Treatment.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.

At 4 p.m.

June 24, Mr. Fairbank, Spinal Curvature.

BURDETT'S HOSPITALS AND CHARITIES 1909.

By SIR HENRY BURDETT, K.C.B., K.C.V.O.

(London: The Scientific Press, Ltd. Price 7s. 6d. net. Twentieth Issue.)

THERE comes a time when certain of the best annual works of reference reach such a pitch of organised efficiency and reliability, that one can hardly imagine how the world ever got on without them. Into this class "Burdett's Hospitals and Charities" made its entry some years ago; but, old friend as it is, there seems to be no limit to the industry, enterprise and originality of its compilers. Every year sees the old features ripened and mellowed, with new ones added; and every year the value of the annual as a work of reference becomes more pronounced. Where improvement seems scarcely possible, each year yet shows something modified in the direction of greater clearness, or some simplification of the difficult subject of hospital finance. A special feature of this year-book, is the lucid manner in which the complicated problems of hospital economics are reduced to order and made easily understandable of the uninitiated. Those who are already familiar with the annual will find herein an advance on previous issues: those who are not may be assured that if ever they want information about any question of hospital and charitable enterprise in any part of the world, it is to this guide-book they may confidently turn for information. Finally, it should be noted that the persistent fallacy which may be summarised in the sentence "The average total annual volume of charitable contributions is fixed and immutable," is once again exposed and refuted.

THE Orient Line announce that their new 12,000 ton steamers just built for Australian mail service, are available for a sea-trip holiday to Gibraltar, Marseilles, and the Moorish cities of Spain or Africa. The new steamers are most luxurious, and one of them, the *Otranto*, and the royal yacht H.M.S. *Ophir* will make a series of pleasure cruises to the fjords of Norway. Full particulars can be had on application.

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The Hospital

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SATURDAY, JUNE 26, 1909.

EXPERIMENTS ON LIVING ANIMALS.

ON Monday June 21 the Home Office issued a return, showing the number, range and character of the experiments performed upon living animals during 1908, by licensees under the Act of 1876. This return distinguishes the nature of the various experiments performed during the year, and it is issued as a Parliamentary Paper. The appearance of this report on the longest day of the year is not altogether inappropriate. Public attention has lately been drawn, by a number of different forces, towards the whole subject of experimental research, which certainly deserves careful consideration from every responsible citizen. The conflicting claims of the various rival anti-vivisection societies, and of the newly formed but already powerful organisation, called the Research Defence Society, have already brought the matter into the category of questions of the day.

The public seems already to have grasped the great essential principle which underlies the subject of vivisection: namely that facts, and facts only, are needed for the formation of a settled opinion. The Home Office return bristles with facts, and is therefore an invaluable asset to the somewhat uphill activities of the Research Defence Society, whose annual general meeting, under the chairmanship of its distinguished president, Lord Cromer, is taking place at the house of the Royal Society of Medicine at the time this number appears. The inspector's report for England and Scotland naturally occupies the greater share of the return, since the great majority of experiments upon living animals in these islands are conducted upon this side of St. George's Channel. This however must not be interpreted as a sign that educated Irish opinion in any degree dissociates itself from the view that experiments upon animals are vitally necessary for the maintenance of medical and scientific progress. The inaugural meeting, early in the present year, of the Dublin branch of the Research Defence Society, showed clearly enough that in this matter Ireland is at one with the larger island.

The purpose which we have in view, and which should by now be well known to our readers, will be served best by the publication here of a few short extracts from the Home Office return. These will give the defenders of the honour and potential

strength of the medical profession material for personal satisfaction, and—what is at the moment of far greater importance—material wherewith to combat and defeat the insidious attacks of the enemies of truth, progress and true humanity.

The report for England and Scotland shows that all licensees were restricted to the registered place or places specified on their licenses, with the exception of those who were permitted to perform inoculation experiments in situations other than "registered places," with the object of studying outbreaks of disease occurring in remote districts or in circumstances rendering it impracticable to perform the experiment in a "registered place." The total number of licensees was 453, and of these 126 performed no experiments. As is prominently pointed out in *The Times* of June 22, it is perfectly clear, from the tabulated returns of registered places and licensees, that licenses and certificates have been granted only upon the recommendation of persons of high scientific standing; that the licensees are persons who, by their training and education, are fitted to undertake experimental work and to profit by it; and that all experimental work has been conducted in suitable places, and under proper conditions. The total number of experiments was 88,634, being 15,260 more than in 1907; but this increase is largely due to the greater number of simple inoculations, which were more numerous than in 1907 by 14,989. The balance of the increase was accounted for by 271 experiments, all performed under anæsthesia. Every experiment involving a serious operation, 1,615 in all, came under the provision of the Act that the animal must be kept under an anæsthetic during the whole of the experiment, and must, if the pain is likely to continue after the cessation of anæsthesia, or if serious injury has been inflicted, be killed before it recovers. In the experiments performed under special certificates, 1,236 in number, the initial operations are performed under anæsthetics, from the influence of which the animals are allowed to recover. The operations are required to be performed antiseptically, the report states, so that the healing of the wounds shall, as far as possible, take place without pain. If the antiseptic precautions fail, and supuration occurs, the animal is required to be killed.

Eighty-five thousand seven hundred and eighty-three experiments were performed without anæsthetics; but these were mostly inoculations; and in no instance was a certificate dispensing with anæsthesia allowed for an experiment involving a serious operation.

In the significant words of the return, the irregularities which occurred during the year were few,

and all arose from misunderstanding or inadvertence with respect to the extent or application of certificates. Finally, with regard to Ireland, the inspector reports that the work performed there in 1908 under the Act was, in his opinion, free from abuse, and was sincere and well-intentioned. Thus may be dispelled, by the light of cold, quiet facts, the shadowy horrors circulated by unprincipled agitators.

THE LOST ART OF PRESCRIBING.

It is a venerable grumble among physicans of the older school that the art of therapeutics is decaying because the younger generation is extremely ignorant of materia medica and remarkably inefficient in the matter of prescribing elegant mixtures. The result, it is averred, is that proprietary drugs are acquiring an increasing vogue to the detriment both of the patient and the practitioner. A recent contributor to the *Medical Record* has made this thesis the text of an address upon the proper teaching of therapeutics in medical schools. "I have maintained for years," he says, "that the best way to do away with nostrums is to give our medical students thorough courses in materia medica, medical pharmacy, pharmacology, and therapeutics. The way to abolish proprietary medicines is to teach medical students how to prescribe, and acquaint them with the physiological and therapeutic action of drugs. They should be taught how to write or compound prescriptions that would be palatable and agreeable, compatible, yet so associated or combined as to meet the indications for which the prescription is intended in a scientific manner."

With due submission to the ripe experience of these praisers of the past we take leave to question the deduction while admitting the premiss. It is past question, we believe, that the younger generation of medical men is far behind its predecessors in the matter of prescription-writing: a thing in itself to be regretted. But the march of events which has evolved this state of affairs has not been without its compensations, to the patient at least. It may be granted, from the professional point of view, that the old-fashioned "grapeshot" prescription, as it has been irreverently called, was a triumph of art, and that to combine a dozen medicinal substances in one draught so skilfully that it should neither precipitate, nor explode, nor revolt the patient's stomach, was no mean achievement. But to say that the loss of this faculty has invited the inroads of proprietary medicines is an assumption not only unproved, but probably incorrect. To us at least such a proposition seems an argument of the *post, ergo propter* variety, for the following reasons. Fifty years ago the Pharmacopœia was largely composed of crude drugs, for pharmaceutical chemistry was relatively in its childhood, and standardisation of drugs was

not attempted. With the rough materials at his disposal the physician of the time no doubt did wonders in the way of obscuring nauseous qualities and compounding imposing formulæ. Time slipped away and presently there arose a generation of chemists who were not content with the old crude drugs, but set to work to standardise them and isolate their active principles. From this stage it was but a step to the subversion of the old-fashioned draught and its replacement by preparations less bulky and more convenient, and at the same time more pleasant to take. For with all their boasted skill in compounding elegant mixtures the "grapeshot" school seems to have left a tradition among the contemporary laity that draughts even in those days were not grateful to the palate. We have to consider, then, on the one hand a time in which drugs were crude, unstandardised, very variable in strength, and administered in a form which, if as palatable as it was possible to make it, was nevertheless inconvenient and distasteful: on the other we have an epoch in which the active principles of those drugs can be obtained pure, standardised, vouched for in both these respects by chemical firms of high scientific reputation, and withal convenient and easy to administer. Can it be wondered at that the medical practitioner of the present day finds himself driven, even against his material interest, to give the proved and pleasant forms of drug which the patient knows well enough are on the market, rather than to spend his time in learning the *finesse* of prescribing the antiquated remedies of the British Pharmacopœia.

The truth is that our Pharmacopœia is an anachronism. It contains, of course, plenty of old and well-tried friends, but they are almost swamped in rubbish. When a person has travelled by an express train it is idle to assure him that a coach is the best way of getting about, and still more idle to complain, when he refuses to go back to coaching, that his tiresome choice is due to the fact that coachmen have forgotten how to drive. The British Pharmacopœia does not meet the needs of the present day, and in consequence it goes to the wall. No one is responsible for this except those whose business it is to keep the Pharmacopœia level with the march of civilisation. This they have neglected to do and the result is what we see.

ANNOTATIONS.

The Medical Defence Societies.

ONCE more the three societies which exist—two in England and one in Scotland—for the purpose of protecting members of the profession from the frequently fraudulent and almost always unfounded claims at law of litigious patients or covert blackmailers, have a year of steady and unchecked progress to report. One of the most gratifying features about all three reports is the uniform increase in membership. The Medical and Dental Defence Union of Scotland obtained 240 new members during the year; the London and Counties Medical Protection Society 340, and the Medical Defence Union 478: compared with these additions to the rolls, the losses by death and resignation were small, and each Society made a substantial gain. With the exception of the first-named possibly, the increases were smaller than has frequently been the case in the past; but the fact of the matter doubtless is that so large a proportion of the profession now belongs to one or other Society, that the field for recruiting is becoming much more limited. Law costs, it is apparent from the annual reports, tend to become heavier each year, and absorb the lion's share of the subscriptions to the Societies, which are, however, all living within their incomes. To build up a reserve fund of investments against a possible run of misfortunes and adverse verdicts is obviously a wise and prudent course: yet at the same time there is no object in unduly increasing the resources of defence corporations, which are not intended to be profit-making concerns, but are really systems of mutual insurance between the members. From this point of view, therefore, the fact that income is nearly balanced by expenditure is a sign of a sound financial position; and the smallness of the surplus is not really any cause for disquietude. It is also noticeable how seldom it is possible to recover costs when awarded in courts of law against the litigants whose obstinacy or perversity forces the Societies to take up cases on behalf of members. The man of straw seems to be particularly prominent in attacks on the medical profession—another proof, if any were needed, of the unwisdom of the practitioner who remains outside the membership of one or other of these beneficial institutions.

The Menace of Cholera.

A LACONIC telegram in the foreign news column of the daily papers announces that on Saturday last there were notified fifty-three cases of cholera in St. Petersburg, and ten deaths. Without wishing in any way to sound a note of panic or needless alarm, we do seriously direct the attention of the medical profession to this announcement, the full import of which lies perhaps a little below the surface. It will be remembered that the disastrous epidemic of last autumn was brought to a close, in accordance with the forecasts of experts, by the advent of winter and the freezing in of the Neva and the Petersburg canals. It was further predicted that, unless the public health authorities and sanitary scientists of the Tsar's capital could devise efficient prophylaxis in the meantime, a very serious risk of a recrudescence of the scourge might be looked for

when the ice should melt. The Baltic opens as a rule in May, and already cholera cases have risen to the figures quoted above. These figures are, of course, small compared with those of last October, but it has to be remembered that the epidemic of 1908 did not begin until the beginning of September: it seems only too likely that, with the hot, dry months still ahead, St. Petersburg may be as heavily visited as last year, or even more disastrously still. What concerns this country especially is the risk of the importation of the disease by the crews of the very numerous vessels plying in the timber and other trades between the two countries. We cannot afford to look with equanimity upon any outbreak of this kind in a city whose commercial relations with Hull and other English seaports are so intimate. Still, forewarned is forearmed; and it cannot be said, in the event of any cholera cases making their appearance in this country, that there has not been ample indication beforehand of the quarters in which danger lies. It is to be hoped that no such cases will occur, but the contingency is not impossible.

Embankment Pests in Relation to the Public Health.

THE miserable plight of those outcasts of humanity who frequent the Thames Embankment by night, and endeavour to sleep upon the seats there, is a theme which has for years supplied novelists, journalists, and dramatic authors with material for effective contrast with the luxury and glamour of the big hotels overlooking the river. There is, however, an aspect of the situation which is untouched as a rule by those in quest of an antithesis or a moral; and that is the relation of these persons who spend their nights on the Embankment to the public health. There is little doubt that—brilliant exceptions notwithstanding—the ordinary Embankmenter is a person whose character is irredeemable. Drink and disease and other kindred forces of evil have submerged his moral nature to a depth from which not even the ministrations of the most practical philanthropy can lift him: vermin swarm upon him, and of dirt-disease he is a prolific source. Now the seats on the Embankment are used during the day by ordinary citizens of various degree, and especially by those to whom the State is beginning to recognise its obligations, the children. And there can be no possible defence of a system which allows verminous and frequently infective persons to spend the night on public seats which healthy people innocently use during the day. It appears from the evidence given at an inquest held the other day upon one of these miserable pests that the Cleansing of the Person Act, which is optional for local authorities, confers no power on the police to arrest and compel the disinfection of the repulsive hives of vermin, who, according to the police, swarm nightly upon what might be one of London's most admired promenades. One thing or the other—either compulsion for local authorities or extension of the powers of the police—seems urgently called for by a scandal to which it is incredible that a city like London should remain indifferent.

MEDICAL OPINION AND MOVEMENT.

THE Administration of Mercury in severe cases of Syphilis by intravenous injections may be said to be still *sub judice*. The chief objection to this method is the localised phlebitis that it is liable to induce. Dr. G. P. Crume reports, in the *Journal of the American Medical Association*, that he has carried out more than 200 injections without any accident or complication. He uses a one per cent. solution of cyanide of mercury and injects one to three cubic centimetres every day or every other day, according to the tolerance of the patient and the severity of the disease. He considers intravenous injections are much more rapid in their action than intramuscular, and advocates this mode of administration especially in cases of cerebral, ocular, and visceral forms of the disease. He uses the glass syringe of Luer, with a chromic platinum needle, and he selects one of the veins on the dorsum of the hand for injection. The arm is bandaged tightly above the wrist to arrest the return circulation, and the needle mounted on the syringe is introduced into the most prominent vessel in a parallel direction. If the needle is well within the vessel, blood appears in the syringe. The bandage is then removed and the injection made.

THE Lingual Tonsil, and the troubles that may arise from its Hypertrophy, appear to have received inadequate attention at the hands of medical practitioners; at any rate, such is the opinion of Dr. Maurice, who contributes an article on the subject to the *Journal de Médecine*. The lingual tonsil is the fourth tonsil of the ring of Waldeyer, of which the third gives rise to the adenoid vegetations of the nasopharynx. It is situated in the vertical portion of the tongue, between the V of the calciform papillæ and the glosso-epiglottidean fossæ. It is well developed in children and tends to disappear at puberty. The atrophy commences usually at the middle, and consequently gives it a bilobed appearance. According to Dr. Maurice, fifty per cent. of the patients who consult him for laryngeal or pharyngeal troubles present a hypertrophy of this tonsil, and a large number of them only require treatment for this affection. The hypertrophy may not in itself give rise to symptoms unless congestion and inflammation induced by cold supervene. The so-called "irritable" or "nervous" cough is often caused by a morbid condition of this lingual tonsil, and treatment on this line effects a speedy cure. The tonsil can be examined and its condition ascertained by the finger, but laryngoscopic examination is, of course, much more satisfactory. It frequently presses upon the epiglottis, so that the latter cannot be sufficiently raised to get a view of the larynx. The condition is best treated by the application of the electric cautery. If the hypertrophy is very considerable, the gland may be removed by a Lennox-Brown tonsillotome.

EXTENSION or "Stretching" of the Sciatic Nerve is a well-recognised surgical method of treatment for sciatica, and its efficacy has been explained on the supposition that it frees the nerve from

adhesions formed around it as a result of a perineuritis. Dr. Paul Carnot, writing in *Le Progrès Médical*, recommends a method of continued extension similar to that adopted in cases of fractured femur. A stirrup of diachylon plaster extending beyond the foot is fixed to the leg by encircling bands of plaster, and a small piece of wood is fitted in the stirrup, from which a cord passes over a pulley at the foot of the bed, and to this is attached a weight. By raising the foot of the bed counter-extension is obtained by the weight of the body. In the case reported by Dr. Carnot, two kilos did not produce sufficient extension to relieve the pain, but three kilos immediately effected this. In this case, every other means of treatment had been adopted previously without result, before extension was tried. Relief from pain only lasted at first so long as the extension was applied; but after continual extension for some days the weight could be removed for several hours without recurrence of the pain. In course of time the extension was only applied at night, and the patient was able to get up in the day. At the end of fifteen days the extension was dispensed with altogether, and the patient only complained of a sort of dull ache on fatigue. Apart from the cure that the treatment appears to have effected in this particular case, the method is simpler, more rational, and much less heroic than the usual methods of "nerve stretching," and has therefore much to recommend it.

AN interesting account is given in the *Zentral Blatt für Chirurgie* of the third attempt to carry out Trendelenburg's Operation for Embolism of the Pulmonary Artery. The first two operations were performed by Trendelenburg and his assistant Sievers at Leipzig. This third attempt was made by Dr. Krüger, of Iena. The patient was a woman, aged thirty-three, who had undergone operation for radical cure of a right inguinal hernia. All went well till suddenly, ten days after the operation, symptoms developed indicating an extensive pulmonary embolism; rapid pulse, dyspnoea and cyanosis. Preparations for operation were rapidly made, and with a few whiffs of chloroform, a flap was raised over the second to the fourth costal cartilages, the cartilages divided just within the costochondral articulations, and the whole laid back on the sternum. The edge of the left lung was seized with forceps and fixed to the outer edge of the incision, and the pericardium opened. The pulmonary artery appeared hard and obstructed. An indiarubber tube was passed behind the artery in the transverse sinus of the pericardium and two pairs of Kocher's forceps applied to the artery. Between these the artery was incised for two centimetres and a large clot was extracted. The heart ceased to beat and the pupils became dilated. The incision was provisionally closed with forceps and the heart massaged. The heart quickly recovered. A further clot was then removed, and behind it black blood flowed in abundance. The heart again ceased to beat. The same proceeding was repeated and the heart beat

again. The artery was sutured and the operation completed. Afterwards the pulse was good and cyanosis disappeared. The condition remained favourable for two days, but lung trouble supervened and the patient succumbed on the fifth day. Autopsy showed suppurative pleurisy of the left side, involving also the mediastinum and thoracic wound. Dr. Krüger attributes this to the haste with which the preparations for operation were necessarily made, and it seems possible that the operation might otherwise have proved successful.

AMONG the causes of Pericolitis, chronic constipation certainly plays a great part. Chronic enterocolitis, hæmatogenous infections, nervous and so-called functional intestinal disturbances must also be recognised as ætiological factors. With regard to the question of chronic constipation the author touches upon the interesting and formerly much debated subject of stercoral typhlitis, *i.e.* a perityphlitis unaccompanied by any lesion in the appendix. With regard to the treatment the author lays stress on the judicious employment of aperients, especially in early cases. In old and neglected cases, purgatives must be very cautiously used, and the question of ultimate surgical interference must be considered. Local applications of cold or hot compresses over the area of tenderness will ease the patient. Rest in bed, and a light—not necessarily wholly fluid—diet are indicated, and in every case the differential diagnosis must be carefully gone into before it is accepted that the case is one of pericolicitis. There can be little doubt that at present many cases of this condition are erroneously diagnosed and treated as cases of appendicitis.

PANCREATIC Cysts are not of everyday occurrence, and this condition in young infants must be extremely rare. Dr. Maxwell Telling and Mr. J. F. Dobson report such a case in a child which came under observation at the age of eleven months for abdominal distension: this symptom the parents had noticed for the preceding two months. The infant had no symptoms of illness, and the presence of a palpable tumour above the umbilicus was so obscure that it was not appreciated by many of those who saw the case. During the next month the baby gradually lost ground and weight, whilst the circumference of the abdomen increased. It was accordingly operated upon, and under chloroform an incision was made mesially above the umbilicus, when a large smooth-walled cyst appeared between the stomach and colon. This turned out to be of pancreatic origin: it was opened and drained. The contained fluid amounted approximately to a pint and a half; it was alkaline, of sp. gr. 1025, contained no sugar, but went nearly solid on boiling, owing to coagulation of albumin. No ferment action was obtainable, there was no evidence of hydatid disease, and the cyst wall was lined by columnar epithelium. As for the patient, the sinus healed in five weeks: despite temporary set-backs in convalescence, the child ultimately did very well, and is now in perfect health.

THE viability of the *Bacillus Typhosus*, as excreted under natural conditions by the "chronic carrier," has been carefully investigated by Major J. C. Morgan and Captain D. Harvey, whose conclusions are published in the *Journal of the Royal Army Medical Corps*, and are of much interest in connection with attempts to prevent the spread of the disease by such patients, commented on in our columns last week (*THE HOSPITAL*, June 19, 1909, p. 300). These observers have experimented with the urine and fæces of two soldiers who were passing enormous numbers of bacilli, respectively eight years and six months after their illnesses. It is shown that micturition pollutes the soil for a maximum period of about 24 hours. After that time no typhoid bacilli can be isolated from any portion of the contaminated ground, whether it has been exposed to the sun or is in the interior of a dark hut. On the other hand, when towelling was soaked in urine containing 50,000 bacilli per c.c. the bacilli were recovered from a piece kept in the dark for eleven days afterwards, whereas a piece exposed to light was no longer infective at the end of four days. In water and in milk the life of the bacillus seems to be extremely short, a few hours being sufficient to render sterile these fluids contaminated directly with urine rich in bacilli. Urotropine in 10-grain doses had absolutely no effect on the bacilluria in the patient on whom it was tried. In dry earth methods of disposal of fæces the bacillus typhosus can be readily recovered up to a week, and it can exist in the interior of a dry fæcal mass for as long as eighteen days.

A MOST unusual case of apparent recovery from Diabetes Mellitus in a boy of 10 years of age was shown at a recent session of the New York Academy of Medicine by Dr. Heiman. The patient when first seen had for five months suffered from thirst, loss of weight, frequency of micturition, and increased appetite. He was passing 5,700 c.c. (about 10 pints) of urine of specific gravity 1032, with 5 per cent. of sugar; acetone and diacetic acid were both present. At first a fair quantity of carbohydrate food was allowed, but as the diacetic acid did not disappear, the diet was reduced to meat, fish, and a few bulky vegetables such as cabbage, which contain but small quantities of starch. The boy to satisfy his hunger ate enormous quantities of these foods. Bicarbonate of soda, atropine, and olive oil were the drugs ordered; the sulphate of atropine was given three times a day, and the dose increased very gradually up to $\frac{1}{16}$ grain at a time. Under this régime the boy gained weight, lost both sugar and diacetic acid, and now passes but 2,000 c.c. of urine daily. At the same time the least indiscretion in the direction of excess of carbohydrate is followed by immediate glycosuria; 29 grammes a day is as much as can safely be allowed. Notwithstanding the results of treatment, it was considered that the ultimate prognosis must be given with great reserve. Still, diabetes at this age is so uniformly serious and progressive that the case must be regarded as a most remarkable one.

THE whole subject of Cæsarean Section for Placenta Prævia is discussed by various writers in the *American Journal of Obstetrics*. In the main the verdict is unfavourable, though not unanimously so. What seems to have weighed with most of the contributors is the maternal mortality of this operation, which is given as 20 per cent. in placenta prævia cases. It is admitted that a somewhat better prognosis for the fœtus attends abdominal section, but most of the obstetricians report maternal mortalities varying from 3 to 6 per cent. by conservative methods, and this difference is quite rightly held to be decisive against Cæsarean section. One writer, however, Dr. Fry, points out that in many of the 20 per cent. of fatal cases there were quite obvious contra-indications of the operation, and he shows by a table that since 1905 the figures show an enormous improvement in this respect. Dührssen's vaginal Cæsarean section is favourably mentioned by more than one writer as of value in certain special cases, but on the whole the consensus of opinion is in favour of slow dilatation of the cervix until one or two fingers can be admitted, followed by Braxton Hicks' version and by hydrostatic bags if necessary. Emphasis is laid on slow delivery unless hæmorrhage has already been very grave; and accouchement forcé, Bossi's dilators, and rapid extractions in general are condemned almost by everyone. This approximation on the part of obstetricians to British rather than Continental teachings is interesting, especially during the present age of operative midwifery.

TUFFIER recently read a paper before La Société de Chirurgie upon the principles which should govern the hot-air treatment of Diabetic Gangrene. Several years of clinical investigation have convinced him that the results attending this line of treatment depend upon the temperature of the air used, and vary according to whether this is projected on to the wound under pressure or the limb placed in a warm atmosphere. Air raised to a temperature of between 35 deg. and 40 deg. C. is particularly useful in cases in which gangrene is imminent, but not definitely declared. When, however, sloughing has commenced, the best results are obtained with air heated to between 300 deg. and 500 deg. C., delivered under pressure. The author merely claims that his rules and suggestions will improve the line of treatment first proposed by Guyot in 1840, and extend its range of application and utility.

SURMONT reports a case in which Aortic Insufficiency followed a difficult labour, and seemed to be caused by it. The patient, aged 41, after a labour lasting 48 hours, was delivered with forceps. There was no history of infectious fever, gout, rheumatism, or alcoholism, and the cardiac symptoms all dated from this, her second delivery. Ever since this, which occurred two years ago, the patient has been subject to vertigo and palpitations, and now presents the characteristic physical signs of aortic insufficiency. Her cardiac lesion is, therefore

included in the category of valvular ruptures, due to violent effort. The fact that at the time of the accident she felt no retro-sternal pain, which is a characteristic symptom of this occurrence, scarcely prejudices the accuracy of the diagnosis, since the absence of this phenomenon might well be explained by the co-existence of labour-pains.

A RECENT number of the *Therap. Monatshefte* contains an article by Ehrenayer and Stein on the action of Iodides with reference to Arterio-sclerosis. Iodine preparations only act after liberation of their ions, which are an energetic protoplasmic poison. Cells, the resistance of which is in any way diminished, are thus easily destroyed by the iodide. In arterio-sclerosis the combination of the ion with cells of diminished vitality favours the elimination of these latter. The stimulus must always be maintained equal, an effect which can only be secured by progressively increasing the dose. In addition the drug acts in opposition to the effects of alcohol, which increases the viscosity of the blood. When undergoing treatment with iodides, organic acids should be excluded as far as possible from the diet, as they tend to liberate free iodine. For the same reason milk, which readily gives rise to lactic acid, should be avoided, and it is good practice to give alkaline salts with iodides. The constant fear of producing iodism is therefore due to a therapeutic fallacy, and the notion that certain organic compounds of iodine produce no toxic effects is not borne out by experience. Widely advertised compounds, supported by glowing assertions, give no results which cannot be obtained by progressive doses of inorganic iodides. Moreover, the iodine content in some of these compounds is extremely low. The authors are of opinion that alkaline iodides are preferable, and state that their action is increased by administering several of them together—e.g. sodium and potassium iodide. Iodism is the inevitable reaction of iodides. Excessive reaction can be controlled with ease, but it should not be entirely suppressed. An efficient therapeutic effect can only be obtained by a prolonged administration of progressively increasing doses.

CHAMPEAUX, of Lorient, in *La Revue Hebdomadaire de Laryngologie* publishes a study of the symptomatology, pathology, and treatment of Sneezing. It has long been a popular notion that rubbing the root of the nose and tapping the frontal region will diminish the sensation of irritation before an attack of sneezing, a fact which Katzenstein explains by the existence of a centre for sneezing in the frontal lobe. Himself a neuro-arthritic and subject to spasmodic rhinitis, the author has personally tried frontal tapping, friction, and massage at the onset of an attack of sneezing, and has found that the most successful of all such measures in his own case is a gentle massage over the frontal region with the palmar surface of the fingers of both hands, commencing at the temples and carried towards the middle line, but not in the opposite direction. This manœuvre must be repeated several times in succession until relief is obtained, and is best performed by a second person.

HOSPITAL CLINICS.

CLINICAL DEMONSTRATION OF SELECTED SKIN CASES.

By G. NORMAN MEACHEN, M.D., B.S., M.R.C.P. (Lond.), Physician to the Skin Department, Prince of Wales's General Hospital.

(Given at the North-East London Post-Graduate College).

SYMMETRICAL COMEDONES.

GENTLEMEN,—This little boy, aged two, has had these curious symmetrical groups of comedones upon his face for the last eight months. You can see them scattered in groups upon the forehead, cheeks, and chin; the chest and back are free, and there are no papules or pustules anywhere. Careful questioning of the mother has failed to elicit the fact of any irritating application having been made to the child's skin, for, as you know, it is usually regarded as more or less of an axiom that these lesions in children are always produced by some application. Since their appearance she has been using several of the widely advertised proprietary remedies which profess to "cure all skin diseases." One text-book upon the subject says that comedones never occur in young children, but in the case before us we have an exception to this statement, and, although rare, they are not so excessively uncommon. The condition is easily cured by gentle friction with a little soft soap, followed by the inunction of a mild sulphur ointment.

EPITHELIOMA FOLLOWING LUPUS.

In this old lady, aged 76, we have an example of, perhaps, the most terrible of the complications of lupus, epithelioma. She was sent up to the hospital by Dr. Best, of Cheshunt, with the history that her face has been "rough," i.e. both hirsute and affected with lupus, for the last twenty years. During most of this period she has been compelled, for the sake of appearances, to shave the hair, and you can see now that were this not done she would have quite a respectable growth of hair upon the chin and sides of the face. There is no family history of phthisis. Four months ago a "rough sore" was noticed by her which has gradually spread up to the present time; now over the right malar region, encroaching upon the outer canthus, there is an ulcerated surface with indurated, heaped-up margins of a very formidable appearance. There are no enlarged glands. The lupoid area, which is practically quiescent, extends over the whole of the right side of the face and ear, with a spur across the nose. The patient's general health is good.

The number of cases of lupus in which epithelioma develops is about 2 per cent., but Dubois-Havenith has met with it in as many as five out of his 118 cases. A few cases have developed while patients have been under treatment for their lupus by x-rays, such cases having been described by Norman Walker, Da Costa, and others; but it should be clearly understood that any irritant, whether x-rays, the act of scratching, or the process of shaving, as in the present case, may, under suitable circumstances and at this period of life, favour the development of epithelioma or carcinoma cutis upon the lupoid area. Considering the close proximity of the orbit to the growth, I fear that surgical measures are out of the question.

She has therefore had, at my request, a very mild exposure to the rays, and, failing any beneficial effect from them, I propose to apply a caustic to the base of the ulcer.

TWO CASES OF LUPUS ERYTHEMATOSUS.

The next case, a young single woman, aged 35, has extensive lupus erythematosus of the face and ears. She has suffered for three years from the disease, and she also gets chilblains in the cold weather. One brother died of consumption. She has not quite the typical "butterfly-patch" of the disease, but rather disseminated areas involving the cheeks, forehead, scalp, and nose. Comparing her present condition with this photograph, taken six weeks ago, I think you will agree that there is considerable improvement. The treatment has consisted of a weekly painting of the affected areas with a mixture of equal parts of powdered camphor and pure phenol, and the internal administration of salicin in full doses, ten grains three times a day. We tried her with quinine at first, after Payne's method, but she suffered too severely from headache to allow of its continuance. The relation of lupus erythematosus to tuberculosis is most interesting. Boeck's statistics show that 28 out of 42 cases presented undoubted evidences of tuberculosis. Sequeira's figures at the London Hospital show that 34 out of 71 cases gave a marked family history of tuberculosis.

I have a unique case here of the same affection involving the scalp only in a married woman of 59. It is very rare to get lupus erythematosus affecting the scalp alone. This patient has suffered for six years. A case of a similar nature was exhibited by Stowers before the Dermatological Society of Great Britain and Ireland in 1898 in which the scalp only had been affected for eleven years. This patient suffers much from headache and a burning sensation in the scalp. You will see how extensive the disease is here, involving the whole of the occipital and a portion of the left parietal area, which is completely denuded of hair, and presents the characteristic circumscribed, reddened patches, slightly scaly and rough, the surrounding parts being perfectly smooth and atrophic. In her case there is the most remarkable history of her having lost eight children with tuberculosis of various organs! I much prefer Unna's name of "ulerythema centrifugum" for this affection. It describes accurately the clinical features—a "scar-leaving erythema, fleeing from the centre"—and, moreover, it has the great advantage of not frightening the patient, for the mere mention of the word "lupus" is often a great alarm to nervous individuals, and naturally so.

ECZEMA AND XERODERMIA.

This little boy, aged five, is now recovering from an eczema engrafted upon a xerodermic basis. His

skin, as you can see well upon the shins and face, is harsh, dry, and the natural lines are much exaggerated. The condition is said to have manifested itself the second year after birth, though, in all probability, it was really congenital. One aunt suffers also from a "very dry skin." Such skins are very prone to get eczema of the chapped and fissured variety—eczema rimosum—and this little fellow's palms and soles were severely affected a few weeks ago. I have ordered an ointment composed of glyc. amyli dr. 2, ung. glyc. plumbi subacet. dr. 2, lanoline ad 1 oz., which has been of great service. No strong soap should be used nor much water, but a little weak tar lotion may be used with fine oatmeal for bathing the affected parts.

MOLLUSCUM CONTAGIOSUM AND LICHEN PLANUS.

Here is a boy, aged 15, with molluscum contagiosum. The tumours are grouped about his left knee, and are of the size of a pea. A few have, as you can see, undergone suppuration, and in their present state could hardly be distinguished from an involuting impetigo or a pemphigus. However, he has some really typical ones upon the inner side of the joint, and also upon the abdomen. Once seen the condition is not likely to be missed again, the waxy, sessile, umbilicated growths being absolutely characteristic. By pressure with the thumb nails the cheesy content of the tumour can be evacuated, and if this be placed under a microscope in a drop of potash-solution the so-called "molluscum-bodies" can be seen

in abundance. Their exact nature has given rise to much discussion. They are not parasites, but merely degenerated epithelial cells containing kerato-hyalin, and of their mildly contagious character there can now be no doubt. When the lesions are very numerous indeed they may give rise to some difficulty in diagnosis, and they have even been mistaken for smallpox. The treatment consists in squeezing out the contents and touching the cavity with pure phenol, a tiny double-edged lancet being a convenient instrument for the purpose.

This is a case of lichen planus hypertrophicus in a Jewess, aged 44. The legs show the condition in a most marked degree, there being purplish coalesced patches raised above the general surface, and very slightly scaly. Some of the primary lesions in the shape of the characteristic plane papules may still be seen, many of them running together to form patches. The disease has lasted for three months, the exciting cause being exposure to cold after a bath. The arms show simply pigmentation and retrogression of plane papules, and you would hardly be expected to make a diagnosis from these parts alone. The mucous membrane of the mouth is unaffected, though some of you may recollect the case of a young man showed at the last demonstration in whom the curious white streaks upon the buccal mucosa were very conspicuous. This patient is responding well to arsenical treatment, and her pruritus, which has been very severe, is kept under control by baths containing a little cyllin.

SPECIAL ARTICLES.

THE HOSPITAL TREATMENT OF INFECTIOUS CASES.

By A. KNYVETT GORDON, M.B.Cantab.; Medical Superintendent of Monsall Hospital, Lecturer on Infectious Diseases in the University of Manchester.

In any large general or special hospital problems not infrequently arise in the treatment of patients who, for one reason or another, are, or may become, a source of infection to others, and whom it is not always possible or desirable to transfer to another institution. In this paper I purpose dealing with the methods which have been adopted from time to time to meet these difficulties.

A patient may require to be "isolated" either because he may be infectious to others in the same institution, or because he may himself contract infection from them. It is only in fever hospitals, however, that difficulties occur with regard to the latter, and I need not consider these now. The precautions that may be taken for segregation of patients who are themselves infectious are of two kinds, structural and personal; and though these may be, and often are, combined in any given instance, yet they depend for their efficacy on such different conceptions of the nature of infection that it will be well to consider them separately. Often, though quite erroneously, they are regarded as being mutually interchangeable.

The separation of patients by structural methods is the oldest plan, and was for many years the only one employed. It was then thought that infection is disseminated mainly, if not entirely, by aerial convection, that it suffices, therefore, to place the

patient in an isolation ward, and that it is then unnecessary to adopt any special precautions in nursing him, or in dealing with the utensils employed for his treatment. It was not uncommon, therefore, to find the isolation block of a general hospital consisting of a series of small rooms all served by the same staff, with one room or kitchen attached where the appliances for all the patients were "washed up" together. A modern development of this is the cubicle system whereby one large ward with glass partitions between the beds is substituted for the several small wards. Architecturally, these cubicles have some advantages over the small wards, and also some rather glaring disadvantages. I do not purpose discussing these here, but it is necessary to point out that the cubicle system in itself affords structural separation only, which is in this respect neither more nor less effective than its predecessors, though it may have some advantages in point of convenience.

Provided that there is no overcrowding of the patients in the ward—and for this purpose we may take 2,000 cubic feet of space for each patient as the irreducible minimum—it is not nowadays believed that infection does spread by aerial convection, except in the case of small-pox, chicken-pox, and, perhaps, measles; and even in these we do not consider this to be the main factor, which is almost invariably to be found in the hands, clothing, and instruments of the

attendants and in the clothing (including bed-linen) and utensils which have been in contact with the patient. Consequently, when an isolation ward or cubicle is available the patient can well be placed therein, but the personal precautions must be adopted as well, with just the same strictness as in the general ward. In the vast majority of diseases other than those just named, structural separation is quite unnecessary, and its employment tends to neglect of the essential attention to details in the nursing. It is a physical impossibility for any one nurse to supervise others under her, in a group of small wards.

It will be well, then, to consider what precautions should be adopted in the case of a patient admitted to a general ward, in order to prevent the dissemination of infection from him. Given the due observance of these, it is safe, in my opinion, to admit to the general medical or surgical wards such diseases as diphtheria, typhoid fever, erysipelas and its allies, and even scarlet fever and whooping-cough, though it would be well to exclude variola, varicella and measles. There is, however, one structural essential which has been mentioned, namely, that the cubic space for each patient shall be ample and the ventilation free. The reason why such diseases as scarlet fever and whooping-cough are apt to spread in a general hospital is not only because the personal precautions which I shall describe are not adopted, but because so often the pressure on accommodation leads to diminution of the cubic space below the requisite minimum of 2,000 feet per patient.

Coming now to the details of the personal precautions: the first essential is the erection round the patient's bed of a "barrier," the main purpose of which is to act as a label and thus show that a certain ritual must be adopted in the nursing of the patient inside it. It should, however, be an efficient label, and consequently I do not consider that the mere placing of a coloured cord round the bed is sufficient. This may be enough for the physician, but it presupposes the same care and knowledge on the part of a newly joined probationer or a junior nurse, who may be just as potent a factor in spreading infection as the medical man.

After trial of many devices, I have for the last three years adopted a circle of screens, about 3 ft. high, covered with sheets wetted with a weak disinfectant solution. It is not suggested that the solution kills the infecting microbes, but a wet sheet probably arrests a certain amount of dust which would otherwise disseminate infection amongst the other patients in the ward. Moreover the labour of keeping the sheets wet may afford a useful lesson in hygiene for the junior nurses.

Beside the patient's bed, inside the barrier, is a locker which is preferably made of metal covered with the same kind of enamel as is used for the familiar cups and plates; this can be easily kept clean, and its surface is far superior to that afforded by any kind of paint. It is also a convenience, especially in surgical cases, to have a couple of glass shelves fixed on the wall over the bed. In the locker or on the shelves the utensils for the exclusive use of the patient are kept.

On the screen a washable gown for the use of the nurse is hung, and also a card on which her instructions are clearly set out. These will naturally vary somewhat in different institutions, but those in use at Monsall Hospital may perhaps be given as a type. They are as follows:

(1) Rubber gloves are to be worn by the nurse for all manipulations connected with the case, including the handling of clothes. The gloves are to stand in a bowl of 1 in 400 izal solution.

(2) The following utensils are to be marked and kept on the glass shelves or in the locker: Spatula, nozzles, clinical thermometer—all to be kept immersed in izal solution. At least two bowls. All feeding utensils.

(3) A plentiful supply of wet swabs is to be kept on the locker, together with a bowl containing izal solution to receive these when used. Handkerchiefs are not to be employed.

(4) No toys or books that have once been used inside the barrier are to be taken outside it except to be destroyed.

(5) In every case a piece of jaconet is to be placed on the pillow-slip, and over this a piece of muslin; the latter is to be burnt whenever it becomes soiled.

(6) An overall is to be worn by the nurse whenever either the patient or his clothes are handled. This is to be kept inside the barrier.

It will be seen that these rules aim at safeguarding the hands and clothing of the nurse and at distinguishing the utensils and appliances for the treatment of the particular patient. The next essential is that means shall be taken to prevent these latter coming in contact with, and thus infecting, those employed for other patients. To this end it is not sufficient that they should only be labelled, but they should be treated in a different manner, and, where the structural arrangements of the ward permit, it is best that every appliance used for a "barriered" case should be sterilised by boiling in a large vessel, and not merely be "washed up" in the ward kitchen or lavatory. Where this is not possible—and for some unexplained reason it is not always considered necessary that a steriliser should be provided for a "medical" ward—it will be necessary for the responsible nurse to see that all appliances that have been used for the other cases are removed from the duty room before those from the barriered case are brought there, and that they are cleansed by the nurse and not by the wardmaid. The most important utensils to be considered are cups, feeders, and spoons; and the practical point is really to treat these as surgical instruments.

There should not be any difficulty in the use of the rubber gloves by the nurses, or in the preservation of the gloves themselves. At Monsall they have been in use by the nurses for seven years, and the system has worked without a hitch. The gloves should be of the quality styled "extra thick," and hitherto those made in America have worn the best. They are a little more costly than the English ones, but they stand repeated boiling very much better, and do not become brittle in use.

It is essential that the nurses should understand that the bare hands cannot be made sterile, or in

any way "safe," by immersing them in a disinfectant solution, or by holding them under a spray or tap. Most nurses in the average ward have to "disinfect" their hands so frequently that if gloves are not employed the skin either becomes chapped or the process is shirked. When gloves are used, however, the texture of the skin is improved, while the gloved hands can be rendered sterile, as I have shown by experiment, by holding them under a spray or running water from a tap for one minute.

It may be well to state briefly the results of this system of isolation. At Monsall Hospital the greater part of the patients are children of the age at which the susceptibility to infection is at its highest; moreover, the fact that they are already suffering from one infectious disease considerably increases that susceptibility. While the system to which I have referred has been of gradual growth, in so far as the details are concerned, the main

features—namely, the barrier itself and the use of rubber gloves by the nurses—have been in existence for six years. The other details have remained unaltered for the last year.

On only one occasion has infection been carried from a "barriered" case to others, and then, owing to a misunderstanding, there was a delay in the isolation of the patient, who, incidentally, was suffering from measles. In every other case, either the patient himself or the others in the ward have been effectively protected from infection. My experience does not enable me to speak as favourably about those treated in small "isolation" wards. In fact, the barrier was introduced because structural separation so often failed. Consequently I feel justified in recommending the adoption of the "barrier" system in other hospitals whose circumstances render it impossible or inadvisable to transfer the patient to the isolation hospital of the neighbourhood.

THE PARENTAGE OF BRITISH MEDICAL MEN OF EMINENCE.

In this analytical age interest attaches to every circumstance of greatness, and especially, of course, of intellectual eminence. The following brief and unpretentious survey of the parentage of some of the more distinguished medical men of the past in this country may, therefore, be not without interest, even though it should warrant no very definite conclusions. It cannot escape notice, however, that those drawn from what are conventionally known as the upper classes are very few. Sydenham's father was a country gentleman, Bright the son of a banker at Bristol; while, although Heberden was supposed to come of an old family—rather an ambiguous expression—the exact social status of his parents does not seem to be generally known. It is recorded of Colles that his family was an ancient English one of good means settled in Ireland. After these, names of distinction in medicine are hard to find in this class. One of the professions, on the contrary—namely, the Church—has contributed largely to the number of those who in medicine have benefited posterity as well as served their own generation. Astley Cooper, Liston, Charles Bell, Jenner, and Benjamin Brodie were sons of clergymen of the Established Church of England or Scotland. The father of Mead, a clergyman of the Anglican Church, afterwards took to Nonconformity, while from a minister of the latter body was also descended Morton, author of "Phthisiologia." Graves was the son of a Dublin professor of divinity. Todd's career forms one of the very few instances (although doctors' sons have succeeded well in other walks of life) of a distinguished medical father having a more distinguished medical son. Huxley's father was a schoolmaster. Trade and commerce of very various descriptions have had a place in the early surroundings of many great physicians. Every medical man knows that John Hunter at one time worked for a relative who followed the occupation of cabinet maker. Gull's father was a master wharfinger, Paget's a brewer and shipowner, and Abernethy's a London merchant. Lettsom frankly called himself "a volatile

creole," which is the more remarkable since on the European side he was of Quaker origin; he was born in the West Indies. The mixture of races as a source of talent and genius has recently been raised to the position of a serious scientific theory, but there are few other quite definite instances to be found in the history of British medicine. Wollaston, who was attracted mainly by the scientific side of his profession, came of an old and intellectually distinguished Staffordshire family, whose fortune, however, was made in trade in London. Lastly, there are those who were certainly men of the people. Probably this class, if the truth were known, would be considerably larger, for even scientific eminence does not exclude the possibility of pronounced "descent-psychosis"—abnormal pride of ancestry. Willis, the anatomist, was the son of a farmer, Addison of a country grocer, Pott of a London scrivener, Huxham, an original observer, and deviser of the pharmacopœial compound tincture of cinchona, of a butcher. The most illustrious Harvey sprang from Kentish yeoman stock.

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MEDICINE.

ASCITES—III.

DIAGNOSIS FROM OTHER CONDITIONS.

(Continued.)

2. *Ovarian Cyst*.—A large unilocular ovarian cyst may give rise to uniform and enormous abdominal distension which may be mistaken for ascites. Sometimes the enlargement of the abdomen is noticed at an early stage to be more on one side than the other, and to have arisen from the pelvis.

The umbilicus may be less deep than normal, and it may even become flush with the surface, but it rarely becomes protruded in the way that is not uncommon in ascites. If the cyst is tense and is lying in contact with the aorta, a well-marked transmitted pulsation may be observed and felt. Similar pulsation does not occur in ascites. A fluid thrill may be obtained only in the anterior part of the abdomen, and not far back in the flanks as in ascites. It may be possible to see the outline of the cyst during respiratory movements, or to feel it.

There is dulness, convex upwards, over the front of the abdomen, and resonance in the flanks; whereas in ascites there is usually dulness in the flanks and resonance in front. Exceptions to this rule have already been discussed. On measuring the abdomen the greatest circumference is generally below the level of the umbilicus, whereas in ascites it is generally at the umbilicus. The latter has often become nearer to the ensiform cartilage than to the pubes, and it is usually nearer to one anterior superior iliac spine than the other; in ascites it is nearer to the pubes than to the ensiform cartilage, and is usually equidistant from right and left anterior superior iliac spines.

A vaginal examination may determine that the uterus is drawn upwards, that its mobility is impaired, that it is of normal size, and that the vagina appears to be lengthened, whereas in ascites the uterus is pushed downwards, is as a rule freely movable, and the vagina appears to be shortened. If paracentesis has been performed the nature of ovarian fluid is often sufficiently characteristic to distinguish it from ascitic fluid. The appearance and characters of ovarian fluid are very variable. In colour it may be clear yellow, greyish, greenish, greenish brown, reddish brown, dark brown, chocolate brown, or even almost black. When dark the colour is usually due to previous hæmorrhage into the cyst as by oozing after a former tapping. The fluid may be clear and watery, but often it is thick, turbid, glairy, mucoid, or slimy. The specific gravity is usually high, from 1020 to 1026, but it may be as low as 1002 or as high as 1050. The reaction is alkaline. There may be a thick deposit on standing, but there is no spontaneous coagulum. Microscopical examination shows red and white blood corpuscles, squamous, columnar, and ciliated epithelial cells, cholesterol crystals, and colloid bodies. A chemical examination discovers serum-albumin, serum-globulin, met-albumin, and salts. The met-albumin is characteristic.

3. *Pregnancy*.—A gravid uterus beyond the fifth month gives rise to general abdominal distension.

The umbilicus may be flattened, but it is not as a rule protruded. It is likely to be pigmented, and there will be a dark brown pigmented line running between it and the pubes. The breasts become enlarged, full, and tender; on compressing them fluid may exude from the nipples in some cases as early as the third month. The mammary veins become dilated and prominent, and the areolæ enlarged, pigmented, and moist. There is a violet coloration of the cervix, vagina, and vulva which may start in the cervix in the second or third month. Foetal movements and uterine contractions may sometimes be seen if the abdomen is carefully observed. On palpating the abdomen the outline of the distended uterus may be felt, and it may present the typical characters of a gestation—namely, a cystic tumour containing both fluid and a solid body, the foetus. The body, head, and limbs of the foetus may be distinguished, and foetal movements and contractions and relaxations of the uterine muscle may be felt. If there is an excess of liquor amnii it may not be possible to make out the above points, and the conditions may readily be mistaken for ovarian cyst or for ascites. A thrill may sometimes be felt; but this is not common unless considerable excess of liquor amnii is present and the maternal parietes are thin.

Important evidence of pregnancy may be obtained by auscultation. Foetal movements may be heard as thuds, taps, or scratching noises. A uterine souffle may be heard as a soft blowing murmur synchronous with the mother's pulse. It may be just audible at the end of the fourth month, thereafter increasing to term. The souffle is apt to vary from time to time in loudness and in quality; a phenomenon which is probably due in part at least to uterine contractions, and is not usually found in uterine souffle due to other conditions, such as large fibromyomata.

The foetal heart may be heard. It varies in rate between 120 and 160. It is not heard as a rule before the fifth month. It is the most important of all the signs of pregnancy. It is generally best heard on the left side of the mother's abdomen at a point about half-way between the umbilicus and the centre of Poupart's ligament. Whilst listening for the foetal heart the mother's radial pulse should be felt at the same time in order to exclude maternal vascular sounds, which would be of the same frequency as the mother's pulse rate, whilst foetal heart sounds are always faster.

Vaginal examination affords important information in all these cases. In pregnancy, unlike ascites, the cervix uteri is thickened, shortened, and softened. It is frequently patulous, so that the finger tip may be inserted, the membranes being felt, and in some cases even the presentation determined.

Ballotement may be obtained from the fourth to the seventh month. There will also be the usual well-known symptoms of pregnancy, amenorrhœa from the commencement, pain and tenderness of the breasts, nausea and morning sickness, and so on.

THE ELECTROLYTIC OR IONIC ADMINISTRATION OF DRUGS.

It is an elementary lesson in physics that teaches us that the passage of a continuous electric current through a solution of a salt causes the basic portion of the salt to go to the negative pole, and the acid portion to the positive pole; the amount of dissociated salt accumulated at either pole is directly proportional to the amount of current passed. The possibility of making use of this phenomenon in causing a given drug to accumulate and act precisely where it is required, either in the skin itself or in the parts beneath it, has long been obvious; but it is only of comparatively recent years that the method has been successfully employed to any extent.

Mr. Clague, in writing upon the subject recently, quotes some experiments made by Professor Leduc, of the University of Nantes, which illustrate in a remarkable way the extent to which the electrolytic method is effective in causing drugs to pass into the tissues through the unbroken skin.

Two rabbits were taken, an ear of one was strapped to an ear of the other by a pad of wet lint. To the outer ears were attached pads of lint moistened with solution of strychnine hydrochloride, and these were joined to a battery of cells. The rabbit connected positively died promptly, the ions of the base—strychnine—having been driven into that animal electrolytically. The other rabbit, through which precisely the same electric current had been flowing, remained alive until the current was reversed, when it was poisoned like the first. A second experiment was made with the same technique, but with cyanide of potassium instead of strychnine hydrochloride. In this case the negatively connected rabbit died, the poisonous ions being the acid ones of hydrocyanic acid. On reversing the current the second rabbit died.

Many other interesting points will be found in Mr. Clague's paper (*Pharmaceut. Journ.*, 1908, p. 346).

The use of electrolysis has long been made in the removal of superfluous hairs, *nævi*, and so forth. The curative results are due to the saline fluids of the

body becoming electrolysed. A platinum or steel needle is inserted into each hair sheath and connected to the negative pole of a battery of about four cells, and the electric current is allowed to pass for about five seconds. This causes the accumulation locally of a small but definite quantity of caustic soda, the vital part of the hair being destroyed by the latter.

Lithium, iodides, or salicylates are all capable of being introduced into the body by the electrolytic method, and when action is required locally—in a gouty joint, for instance—the direction in which the current has to flow through the patient will be the opposite when bases such as lithium are to be introduced, to what it is when acids such as iodide or salicylate are to be driven in.

It has frequently been observed that small doses of magnesium sulphate have caused the disappearance of warts. The electrolytic method has made it possible to remove warts readily, magnesium salts being employed in connection with the electric current. The results are said to be excellent, and there is no scarring such as that which results from knife or caustic. The *x*-rays remove warts equally without scar, but the *x*-rays require more special apparatus than does electrolysis, so that many more cases can be treated by the latter than by the former process. The negative current and sodium salicylate afford great relief to corns. The positive wire in contact with the patient should be one which does not electrolyse under the conditions employed; iron, copper, and silver are consequently not good; platinum or aluminium are preferable. It is important to keep to simple salts as far as possible.

Considerable differences exist as regards individual sensitiveness to the electric current: some patients complaining little if at all, others, on the other hand, flinching even at the idea of the weakest currents. As a rule, however, this is not a source of great difficulty, for the amount of current required is not very large.

PRACTICAL NOTES ON DIAGNOSIS AND TREATMENT.

The Schafer Method of Artificial Respiration.

THE operator kneels by the side of or across the prone patient, places his hands over the lower ribs, and swings his body forwards and backwards so as to allow his weight alternately to fall vertically on the wrists and to be removed. The pressure is exerted gradually and slowly for three seconds, then relaxed for two seconds: and so on twelve times a minute.

Attempted Suicide.

IN the treatment of attempted suicide special care and watchfulness must be exercised to prevent a further and more successful attempt. Such an attempt is a common-law misdemeanour only, and hence there is no need to report the facts to the police; a constable cannot arrest the victim without a warrant unless the affair took place under his eyes.—*Dr. S. B. Atkinson.*

Bullet Wounds in War.

THE great majority of small-bore bullet-wounds may be considered aseptic in the first instance, except where the bullet has carried in portions of clothing with it, or has opened up a septic region, as the intestine. Infection takes place in too many cases from interference by the surgeon or others. Plugging wounds for hæmorrhage is a sure way of infecting them.—*Major Spencer.*

Hysteria.

I BELIEVE it would not be untrue to say that if anybody wished to invent a new sign or "stigma" for hysteria, he could do it by merely suggesting the same symptom in every patient. If, for example, he said in the presence of his hysterical patients that such cases have always anæsthesia to temperature of the big toe of the left foot, he would certainly find such anæsthesia present.—*Dr. A. F. Hertz.*

SURGERY.

MECHANICS AND DYNAMICS OF INTRACTABLE CONSTIPATION.

A REVIEW OF MODERN SURGICAL MEASURES.

To elucidate the peculiarly untroubled temperament of one of the women in his latest novel, Mr. H. G. Wells remarks that "she was—indeed she was magnificently—eupeptic." The range of the distinguished author's knowledge includes a sufficiently intimate acquaintance with physiology for us to be sure he meant by this phrase something more than mere perfection of the chemical processes of digestion, something more than uniformly good absorption and assimilation; he had in mind also complete freedom from the curse of modern civilisation, irregular and inadequate or delayed evacuation of waste products. Indeed, it might be postulated that an efficient daily action of the bowels was the first requisite of this euphonic "eupepsia."

Mr. Arbuthnot Lane, in his brochure on the "Operative Treatment of Chronic Constipation,"* says mildly that "indigestion in one form or another may be regarded as a usual concomitant of delayed and obstructed drainage." Of course Mr. Lane is driving at a condition of things far removed from what is ordinarily understood by chronic constipation. He is thinking of the exceptional cases in which there is extreme alteration of the mechanical conditions normal to the large intestines; of a dilated cæcum bulging down to the floor of the pelvis only suspended by a kinked and adherent appendix, or by "acquired mesenteries"; of an ascending colon unduly bound down to the outer and back wall of the abdominal cavity; of flexures rigidly suspended at a high level; of transverse colon descending in V-shape to rest on the top of the cæcum; of sigmoid flexure distorted and constrained by those bands of peritoneum that undoubtedly are occasionally to be found uniting the adjacent limbs of loops of bowel closely bent upon themselves.

It is very fairly well established now, that mere short-circuiting of the ileum into the upper end of the rectum, whether by lateral anastomosis or by implantation after transverse division, cannot be regarded as a complete operation. The cul-de-sac of colon sooner or later gives serious trouble, whether by antiperistalsis from the sigmoid or by the accumulation and inspissation of its secretions, as Mr. Lane would have us believe. Drainage of the excluded portion does not suffice to secure atrophy, so there is nothing for it, if operation is deemed necessary, but excision of the gut. The magnitude of the operation is not the only danger; but desperate conditions demand desperate measures.

The utility of another much-discussed procedure is not yet fully proven. Appendicostomy, which is certainly not always the simple business described by its advocates, when it can be done, affords not only a means of washing through the colon and administering salts directly into the large gut,

but also serves in some degree to anchor the cæcum up out of the pelvis—a most important point.

Mr. Lane has disarmed criticism of his ideas as to the ætiology of the bands, mesenteries, and adhesions he describes, by saying that we need not believe him unless we like. When he talks about the "materialisation in peritoneum of lines of force," even on the analogy of Wolff's law, there is some strain on the imagination; but when he talks about the causation of cystic disease of the breast and of the ovary by intestinal auto-intoxication, and predisposition to gastric ulcer and tuberculosis of the joints, hinting that prevention is the ideal to aim at, then we think his remedy, excision of the colon, might very well prove worse than the disease; and this in spite of the endeavours of Mr. Hey Groves and Dr. Cohendy to prove that the lower end of the sigmoid and the rectum can efficiently perform all the physiological functions of the whole large intestine. Such a condition of affairs, while it would not necessarily interfere with the hypothetical syphon action, the hydrostatics, as it were, of the large intestine, does upset the dynamics of colon function.

It is not quite clear how much of the disturbance is due to mere displacement and how much to constricting bands, for Hertz has shown by his Bismuth-x-ray investigations that in normal individuals in the upright position there is V-shaped dependence of the transverse colon, and that sharp kinking of the hepatic and splenic flexures, as seen in cases of visceroptosis, does not lead to delay of the contents at those points. Hertz found too that a considerable proportion of cases of constipation were really instances of deficient action of the rectum—"dyschezia," as he calls it. The contents of the bowel pass at the normal rate all the way to the sigmoid, and only suffer delay in the rectum. The presence of fæces in the rectum should excite the desire to go to stool, and it is probably continued neglect of this normal stimulus that often leads to inertness or passivity of the rectal musculature.

No aperients will do this class of case any good; enemata are the rational treatment. In a great many cases where there is real stagnation in the cæcum and ascending colon, thorough systematic treatment by massage and movements, exercises and enemata will do a great deal towards restoring function; but much time and patience are imperative, and cure in the sense of impunity from further attention is not to be expected.

Every now and then, however, cases are seen in practice wherein every effort is exhausted without success, and the patient is reduced to the terrible condition of physical and mental misery for which Mr. Lane finds salvation in excision of the colon. Lethargy, despondency, and irritability, mental and moral hebetude are the psychical expression of progressive auto-intoxication; the physical expression is found in steady loss of flesh, degeneration of the tissues, attacks of faintness, giddiness, neuralgia, or headache, and premature ageing.

* "The Operative Treatment of Chronic Constipation," by W. Arbuthnot Lane. Nisbet and Co., London. Quarto. Pp. 70. Illustrated.

PAPILLOMA OF THE BLADDER.

VILLOUS growths of the bladder, although they are innocent as far as their microscopical characteristics are concerned, are particularly malignant in this respect, that they tend sooner or later to cause the death of their possessor.

Histologically a vesical papilloma is seen to consist of a large number of delicate processes covered with the normal transitional epithelium of the bladder, but none of these invade the basement membrane and run riot in the subepithelial tissue as in a typical carcinoma; and it must therefore be classified as a non-malignant growth. But its rapid growth and its power of infecting the opposite bladder wall wherever it comes into contact with it, and the fact that it eventually kills the patient, render it, clinically speaking, highly malignant.

The first symptom to which it gives rise is nearly always an attack of hæmaturia, which is generally slight, and passes off in a day or two, so that unfortunately the patient does not think it worth while to seek medical advice. The hæmaturia is repeated at intervals, but on each occasion the amount of blood lost becomes more and the intervals of freedom become shorter, until a time comes when the hæmorrhage is so profuse that the patient may become absolutely blanched. Intermittent hæmaturia of the character described is almost pathognomonic of vesical papilloma.

It is a little difficult to account for the intermittent nature of the hæmorrhage, but the most feasible explanation is that as the papilloma grows its processes, each of which carries in it one or more delicate vessels, are subjected to pressure by the contractions of the bladder at the end of micturition, and their tips are broken off. Slight bleeding ensues, which stops spontaneously; the papillomatous processes begin to grow again, and when they have reached a certain size the same thing happens again. But the growth is also expanding at its base, and becoming larger, so that it occupies a greater portion of the bladder. Thus it happens that the bleeding is more frequent, and with each regeneration the processes themselves become larger, so that more blood is lost, and in the later stages the amount may be positively alarming.

As the disease progresses other symptoms make their appearance, the most prominent of which is increased frequency of micturition, both by day and night. In the later stages the condition is also associated with pain.

METHODS OF DIAGNOSIS.

It follows from what has been said that it is of the utmost importance to diagnose the condition in the early stages, in which operation holds out the prospect of a radical relief.

A careful examination of the urine, if it is examined during one of the attacks of hæmaturia, should reveal sufficient evidence to arouse suspicion as to the true nature of the case. If the urine is centrifugalised and examined microscopically it is generally possible to find small fragments of papilloma in the sediment.

No time should then be lost in examining the interior of the bladder with the cystoscope. It is possible to do this without giving the patient an anæsthetic, but it is not advisable. Of course, in an out-patient department, where a number of such examinations have to be made in one afternoon, there is not sufficient time to give all the patients an anæsthetic. In this case the urethra should be made insensitive before passing the instrument by injecting a 10 per cent. solution of cocaine. But to render this effectual the cocaine must be massaged well down into the posterior urethra. It is not sufficient simply to inject it into the external urinary meatus. But, as has been said, it is advisable, whenever possible, to give an anæsthetic.

In order to get a clear view of the interior of the bladder it is essential to irrigate it thoroughly before cystoscopy with some non-irritant fluid, preferably saline or boracic solution, through a catheter; and the irrigation must be continued until the fluid returns quite clear, otherwise a satisfactory view cannot be obtained. The great difficulty in cases in which the disease is at all advanced is that the passage of the cystoscope is in itself sufficient to start the hæmorrhage again, and it is then impossible to get a satisfactory view. But where one is dealing with a single papilloma it can be seen hanging from the bladder wall, rather like a sea anemone as it lies under the surface of the water.

OPERATIVE TREATMENT.

As soon as the diagnosis is established no time should be lost in performing a suprapubic cystotomy and removing the growth. A few practical points in the operation are worthy of mention. After opening the bladder, it is well to pass a couple of sutures through the cut edge on either side, and tie them to the edges of the wound. This is only a temporary measure. At the end of the operation the stitches can be removed. They are very serviceable, because they hold the bladder well up into the wound, and they avoid the necessity of putting clips on the bladder wall. The interior of the bladder is next examined. This is best done through a large speculum, like a Ferguson's vaginal speculum, only that its end is at right angles to its long axis. A head lamp is necessary. By putting the speculum down on to the bladder wall the position and extent of the tumour can be estimated.

The ideal operation is to remove the tumour entire with a pair of curved scissors, taking care not to go through the bladder wall. Hæmorrhage often follows, and if this cannot be controlled by irrigation with hot saline and adrenalin, the bleeding points must be looked for through the speculum and clamped. The clamp may be left *in situ* for a day or two. It is better to do this than to attempt to ligature it, since the presence of a ligature in the bladder acts as a basis for a phosphatic calculus. When the tumours are large and multiple, with broad bases, complete eradication is impossible, and it will generally be found that only the most prominent portions can be got away.

DISEASES OF CHILDREN.

THE USE OF WHEY IN INFANT FEEDING.

THE value of whey in the dietary of delicate infants is so great that it is worth while to take the trouble to understand its composition and various methods of preparation. Strictly it is the fluid which is squeezed out of the curd produced by the coagulation of milk by rennet—that is, it is milk deprived of casein and fat, for the fat is entangled in the meshes of the curd and removed with it. Frequently it is enriched by breaking up the curd with a fork and forcing it through fine muslin. Such whey contains a considerable amount of fat and casein, the latter finely broken up and not reuniting into tough coherent curds in the infant's stomach. The estimations of the percentage of albumin in whey and milk vary considerably, as is seen in the following table:—

PERCENTAGE OF ALBUMIN IN WHEY.

Lehmann	0.30	Hammarsten ...	0.86
Raudnitz	0.30	Smetham... ..	0.88
Hoppe-Seyler ...	0.30 to 0.50	White and Ladd	0.90 to 1.02
König	0.53 to 0.86	Veith... ..	0.92
Van Slyke... ..	0.66	U. S. Depart. of	
Gorup-Besanez...	0.75	Agriculture ...	0.93
Wynter Blyth ...	0.77	Fleischmann ...	1.00

Cautley obtained the high average of 1.41 per cent., and casein 2.61 per cent. in milk. The variations in the results do not enable us to fix on an absolute figure as representing the invariable percentage, but it is fairly safe to assume that the fluid contains about 0.85 per cent. of albumin. In addition it contains the sugar and salts in the same proportions practically as in the original milk.

In curdling milk by rennet it is important to remember that, if the whey is to be used as a diluent of ordinary milk, the rennet ferment must be destroyed by heat. Otherwise on adding it the resulting mixture curdles. Similarly, if cream is added to whey, more or less curdling is produced, varying in degree according to the richness of the cream in fat and deficiency in casein. Thus, little curdling occurs if a centrifugal cream containing 40-50 per cent. fat is added, not sufficient to be of any importance, but it may be somewhat troublesome if gravity cream is used. To destroy the ferment the whey must be heated to 150° F. Higher temperatures are likely to coagulate the albumin and perhaps make it less digestible.

Whey can be prepared from fresh or from skimmed milk, the former by preference. Prime Bristol rennet, essence of rennet, liquid rennet, Benger's or Lazenby's rennet, or junket tablets are added to the milk, which is then warmed to about 100° F. for half an hour. It is allowed to stand until curdled and the whey has separated out as the curd contracts, forming a somewhat turbid fluid which can be strained off. Liquid preparations of rennet vary much in strength, and the glycerine with which they are made may not be pure. Beauchamp Hall has advised the use of a powdered form of rennet, purified and standardised, and made

into tablets. Each tablet contains enough rennet to curdle half a pint of milk—sod. bicarb. gr. 1½, calcium phosphate gr. ½, and lactose gr. 5. The ferment acts better in the presence of the calcium salt, and the bicarbonate neutralises lactic acid, if present. Ten ounces of milk should yield seven and a half of whey.

A simple method of preparing milk so that it contains only half the normal percentage of casein, the other constituents remaining about the same, is to stand the milk in a cool place for three hours, separate the milk by skimming, divide the milk into two halves and curdle one by rennet. Strain off the whey and heat it to 150° F. Then mix the cream, whey, and the other half of the milk. As a rule it is simpler to add cream only to the whey, and then, according to the needs of the child and its digestive capacity, add milk in gradually increasing quantities. The addition of sugar is necessary in all cases. *Tartrated whey*, prepared after a method devised by Still and Myers, is a cheaper food than that made by rennet. Eight grains of tartaric acid, dissolved in half a drachm of water, are added to half a pint of milk which has been heated until it just begins to bubble. The mixture is kept simmering for five minutes, at the end of which time it is curdled and can be strained through butter muslin. According to Still, the whey is faintly acid to litmus, and contains protein 0.58 per cent., fat 1.2 per cent. The proportion of protein seems rather low. The addition of acetic acid causes no further coagulation, and this whey can be added to milk without causing curdling. *White wine whey* or *sherry whey* is made by the action of the acetic and tartaric acids present in the wine. Myers and Still have pointed out that it is better to use a cheap cooking sherry in preference to a more expensive drinking sherry. The cheaper wine contains less alcohol and more acid, so less is required for curdling the milk, and the resulting whey is weaker in alcoholic strength; an important feature if it is to be used as an article of diet for some time. Bring ten ounces of milk to a boil, add two and a half ounces of the cooking sherry, and again heat it until the mixture boils up. Then stand it for three minutes and strain through butter muslin. According to Still, the alcoholic strength is such that one ounce of the whey is equivalent to 25 minims of brandy. It must be regarded as an emergency food. Whey can also be prepared by boiling a pint of milk with two teaspoonfuls of lemon juice.

It must not be supposed that whey is a perfect food, even if cream and sugar are added. Undoubtedly some infants make very rapid progress on the mixture for a time, but it has seemed to the writer that its deficiency in casein is a distinct drawback. There is a certain amount of evidence that albumin cannot replace casein in infant feeding. Possibly the albumin is required for nutrition, and casein for growth. In delicate babies, or those with gastro-intestinal disorders, whey, even if diluted with equal parts of water, may not be digested.

OBSTETRICS.

HÆMORRHAGES IN THE LATER MONTHS OF PREGNANCY.

THE occurrence of bleeding from the uterus during the last two months of pregnancy is always a matter of serious import and may present great difficulties both in diagnosis and in treatment. Never a condition to be lightly passed over, it becomes one of the most serious import if the bleeding is due to placenta prævia, and the patient's life may depend upon correct diagnosis and prompt treatment. In general it may be said that hæmorrhage during the last two or three months of pregnancy is almost always caused by separation of the placenta from its site in a greater or lesser degree. Hæmorrhage caused in any other way is quite rare, and the bleeding then usually depends upon a new growth of the uterus. Partial separation of the placenta may occur coincidentally with new growths of the uterus, and, of course, in no way caused by the growth.

We propose to confine ourselves here to cases of hæmorrhage due to partial separation of the placenta. The reason why a normally situated placenta begins to separate from the uterus is not always apparent. Although in some cases a fall or a blow may appear to be the cause, in others there is no accident or injury to which the lesion may be attributable. The only uterine lesions which seem likely to account for this are endometritis and subinvolution. In these conditions the endometrium, and therefore the decidua of pregnancy, is unduly vascular, containing thin walled dilated capillaries which look as if they would require only a very small alteration in the blood pressure to make them rupture. It is quite unlikely that any foetal condition would dispose to separation of the placenta. On the other hand, we have no difficulty in understanding why a placenta situated in the lower uterine segment must separate as soon as the internal os begins to open up under the influence of uterine contractions. As the uterine contractions do commence to open the internal os as early as the sixth month in some instances, it is clear that a placenta prævia may give rise to hæmorrhage as early as this. Given that hæmorrhage more or less has occurred, the question at once arises whether the condition is accidental or unavoidable hæmorrhage, or, in other words, whether the bleeding is from a normally situated placenta or from a placenta prævia. To find this out a very careful examination is necessary. If the lower pole of the foetus is the head, and it does not sink into the brim of the pelvis along with the lower uterine segment, there is at least a suspicion that the placenta fills the lower segment and prevents the foetal head descending. It is practically an impossibility to palpate the placenta from the abdomen. By the vagina with a *closed cervix* a placenta prævia may be suspected if there is a great thickness of tissue between the examining finger and the presenting part, especially if this is more marked on one side. Naturally, if the cervix is open, a placenta prævia can actually be felt if any part of it is near enough to the

os for the finger to reach it. If, however, the os is closed, and a diagnosis cannot be made, what is to be done next? If we gradually insinuate the finger through the os, we shall be able to detect the placenta if within reach, but if it is not in reach then the case may be one of partial separation of a normally situated placenta in which possibly no further hæmorrhage will occur, and yet our manipulations will cause labour to come on. Consequently we may be in a dilemma in these cases; in some we *must* terminate pregnancy (placenta prævia), in others judicious treatment may stave off labour and permit of the pregnancy going to full term, and yet if we bore the finger through the cervix for diagnostic purposes we shall probably terminate all alike. No definite law can be laid down in such cases; we must be guided by the hæmorrhage, its amount and its character, and whether it is repeated or not.

If a patient has repeated hæmorrhages in spite of rest in bed and sedatives, we are justified in dilating the cervix enough to admit the finger for diagnostic purposes. The gravity of the case may be put thus, that a woman with placenta prævia is never safe from the possibility of death from hæmorrhage until she is delivered and the uterus is under control. Supposing the absolute diagnosis of placenta prævia is made, what is best to be done? We can assume that the cervix will at least admit one finger, and there must have been uterine contractions to cause the separation of the placenta: consequently we have the two desiderata for a satisfactory delivery—uterine contractions and commencing dilatation of the os. What we have to provide for is complete dilatation without further loss of blood.

Without any doubt the safest way for the patient and the one which gives the child the best chance, is the introduction of Champetier de Ribe's hydrostatic bag. The objection to it is its perishable nature. This is a much more important criticism of it than the usual one—namely, that it displaces the presenting part. The bag, when not in use, must be kept partly full of water and blown out fairly tight with air. It must never be folded up. If blown out and kept in a moderately warm place, and occasionally taken out and handled, the bag will keep serviceable for a very long time. The superiority of the bag over version is manifest, for it can be put in through an os uteri which only admits one finger, it stops the hæmorrhage, it stimulates the uterus to contract. The half breech after version will also accomplish the latter two desiderata, but the patient may lose a fatal amount of blood whilst performing the version. Version cannot be done unless two fingers can be passed through the os, and even then is by no means easy for the man who does not encounter many obstetric emergencies. There is usually no difficulty whatever in putting the bag into the uterus, and when once there and filled the patient is practically safe from death from hæmorrhage. Moreover, any properly made bag can be boiled.

LARYNGOLOGY AND RHINOLOGY.

THE TREATMENT OF GLOTTIC SPASM.

THE various forms of spasm of the glottis were recently discussed in THE HOSPITAL (June 5, 1909, p. 263). Their treatment naturally comes under two headings, relief of the actual spasm and prevention of the attacks. In spasm of the glottis in adults, the attack is generally short and sharp, and leaves little time for direct treatment; the inhalation of nitrite of amyl frequently gives relief, and the patient subject to these attacks should be directed to carry a 5-minim capsule of this drug for immediate use if required. When the attacks are less acute but more persistent, the administration of an emetic dose of ipecacuanha is the most reliable method of allaying the spasm; 30 grains of the powdered root, or four to six drachms of the vinum ipecacuanhæ should be given. Except when due to serious disease, as locomotor ataxia or thoracic aneurysm, these attacks of spasm are seldom dangerous, though they are very alarming to the patient; tracheotomy or intubation is practically never required. The spasm always disappears under chloroform, which may be administered in bad cases by the medical attendant; it need not be given to the extent of inducing anæsthesia. In the persistent cases, also, a dose of chloral may give relief.

For the preventive treatment the exciting cause must be found and, when possible, treated. All sources of irritation, such as smoking, must be avoided. In some patients a spasm is readily induced by drinking cold fluids, and this must then, of course, be forbidden. A general tonic and hygienic régime is indicated, and change of air and scene is often of great value. Little can be hoped for from drugs, but a course of treatment by bromides sometimes has a good effect.

The quickest and surest method of relieving the spasm of *Laryngismus Stridulus* is to hook the epiglottis forward with the finger, and the mother or nurse can easily be taught to do this. The spasm also often ceases on stimulating the conjunctiva by touching it with the finger, or the nasal mucous membrane by tickling it with a feather. Smelling salts or ammonia held under the nose may have the same effect, or the inhalation of 1 to 3 minims of amyl nitrite may be tried. Pouring cold water on to the head while the child is placed in a hot bath has been recommended, but there is little time to do this, as the attacks are very short and acute. It should be remembered that they may prove fatal, although this is decidedly uncommon. The preventive treatment consists in the general treatment of rickets if present, and attention to the diet and general health. Overloading of the stomach must be carefully avoided, the food must be good in quality, moderate in quantity, and given at regular intervals, and the regular action of the bowels must be ensured. A change of air is often most useful, especially to a higher altitude. Moritz Schmidt relates a case in which he found immediate benefit by moving the child to the top of the house.

In the *Spasmodic Laryngitis* of childhood, the spasm should be treated on the same lines as the glottic spasm of adults. The dyspnœa is usually neither so acute nor so transient as that of laryngismus stridulus. A smart emetic is the most useful means of allaying the spasm. Mustard or sulphate of zinc may be employed, but ipecacuanha is far the best emetic for the purpose, as its expectorant action is most valuable in the treatment of the accompanying laryngitis. To a child of two years of age it may be given in doses of 5 grains of the powdered root, or drachm doses of the wine, every half-hour until vomiting occurs. The following is recommended by Whitla as acting better than either ipecacuanha or tartar emetic prescribed singly, the dose being for a child one year old:—

R. Vini antimonialis	...	...	...	℥x.
Vini ipecacuanhæ	...	...	...	℥x.
Syrupi scillæ	...	...	...	℥x.
Aquam ad	...	...	...	3j.

One teaspoonful every 15 minutes until vomiting occurs.

In severe cases the inhalation of nitrate of amyl may be tried. Small doses of nitro-glycerine, gr $\frac{1}{100}$, may be given every three hours, and sometimes belladonna proves of value. The remainder of the treatment is that of the laryngitis, which, it should be remembered, is the accompaniment and cause of the spasm. The child must be kept in bed in a warm, well-ventilated room and fed on a light diet; the exhibition of ipecacuanha, or of the mixture given above, should be continued every three hours after the spasm has passed off. The dyspnœa is likely to recur on the next few nights, but tends to get better, and seldom lasts for more than a few days. If the symptoms last longer than this a nourishing diet and stimulants are indicated. In all cases of laryngeal spasm in children, both laryngitis and laryngismus, the tendency to spasm is evoked by some reflex irritation, and the source of this irritation is of the greatest importance in treatment. This is often situated in the alimentary canal, when treatment with rhubarb and soda, or magnesia, combined with the restriction of milk and the avoidance of easily fermentable articles of diet, will have a very good effect. But in a very large number of cases the seat of irritation is in the naso-pharynx; in fact, children subject to laryngeal spasm nearly always suffer from adenoids. Under these circumstances a nasal lotion should be prescribed, to be dropped into the nostrils in infants, and used with a syringe in older children; and after recovery from the attack the adenoids should be removed.

Of the rare form of spasm, dysphonia spastica, the treatment is essentially unsatisfactory, and consists in rest of the voice, improvement in the general health, and especially careful attention to and proper training in production of the voice. There is also no very effective treatment for ictus laryngis; the indications are to avoid any source of irritation, and a course of bromide medication may be tried.

MOTURING NOTES.

A NEW ELECTRIC HORN FOR MOTORISTS.

THE need of an electric horn which can be relied upon to keep in perfect working order for a considerable period and, at the same time, to give forth a loud, clear blast with a minimum current consumption has long been felt by motorists. Hitherto, the great trouble has been the sparking which takes place at the make and break contact points which in a short time renders the apparatus ineffective. This difficulty was occasionally overcome by using condensers, but the cure was almost as bad as the disease as the condensers required renewal more often than was desirable.

Another cause for anxiety to those motorists who had a liking for electric horns was the probability that the vibrating diaphragm would crack, perhaps during a violent effort to arouse a sleeping hay-cart driver. In the construction of the Adul electric horn supplied by Messrs. Marples, Leach and Co., Limited, Adul Buildings, Artillery Lane, E.C., these two drawbacks have been eliminated, without in any way interfering with the volume of sound. The spark resulting from the making and breaking contact is completely avoided by a special magnetic blow-out winding, whilst the vibrating diaphragm is constructed of a tough bronze alloy, the composition of which, it is stated, is known only to the makers. The sound is obtained on principles similar to those which are generally adopted in phonographs or gramophones.

The transformation of electric energy into sound is effected by means of an electro-magnetic contact-breaker which has the effect of setting up rapid

oscillations of the diaphragm when the push (which is usually fitted on the steering-wheel) is depressed. It may be observed that the diaphragm makes approximately 320 oscillations per second, which practically corresponds to the lower E in music. The diaphragm hermetically closes the entrance to the interior of the apparatus, consequently no risk is incurred by using the horn in all sorts of weather.

The lowest pressure which these non-sparking horns are wound for is 8 volts, and the highest 220 volts. To meet the requirements of motorists the makers also supply horns to work at 4 volts, but although the sparking has been considerably reduced it has been found impossible entirely to overcome it without sacrificing much of the sound.

A few points about the current consumption of electric horns are worthy of note. An 8-volt horn takes less than 0.4 of an ampere, and a 12-volt horn 0.8 of an ampere. It will thus be seen that an accumulator having a capacity of 10-ampere hours is capable of producing over 10,000 blasts of a second's duration.

It will be observed from the above figures that the Adul is a very considerable improvement on all electric horns hitherto offered to the motorist. Horns of this type are extremely useful when overtaking hooded vans, hay-carts, noisy farm wagons, etc., when the ordinary horn is ineffective, but up to now the drawbacks stated above have prevented their general use. It should be stated here that this improved type of horn is placed on the market at a very reasonable figure, and may be purchased in the straight or twisted pattern.

SHORT PRACTICAL NOTES FOR MEDICAL MOTORISTS.

It frequently happens that the branches of split pins, not bent back upon a bolt or nut, lacerate the driver's hands when they come in contact with them. The threatening branches should be turned back with the hand and then flattened down with a copper hammer.

After bringing a car to a stop the change-gear lever should always be brought back to its neutral position. This removes the possibility of the driver, as he attempts to start the engine, suddenly pulling the car on to him. This mishap will probably administer a nasty knock, if, indeed, it is not attended by a much more serious injury.

Unless the driver of a motor-car is certain that there is no vehicle close behind him he should never make a sudden reduction of speed or come to a quick stop without giving a warning signal. The customary way of announcing the intention of slowing or stopping is to raise one hand in the air, so that those following may see it readily. Rear-end collisions are undesirable, to say the least, and there are many occasions when they may easily occur if this simple method of signalling is neglected.

Few motorists except those of long experience realise the strain that is put upon the steering mechanism by twisting the wheels around by means of the steering-wheel when the car is stationary. Whenever this is done an unnecessary amount of wear is put upon the steering mechanism, and sometimes even the steering connections may be bent.

Testing a sparking plug on the outside of the cylinder, with no compression to influence it, is not a correct exposition of its efficiency in producing desired results within the cylinder. The plug may spark beautifully when under observation, but when returned to its proper position no perfect result may be obtained. Faulty ignition, if everything connected with the contact-maker, battery, and coil is in order, is usually due to the points of the plug being too far apart. The points should be placed as close together as possible without being liable to fouling by small particles of carbon. Closeness of points not only favours production of sparks under compression, but it interposes less resistance to the current passing across the gap, and thus makes it less liable to follow some other track. "VIATOR."

HOSPITAL ADMINISTRATION.

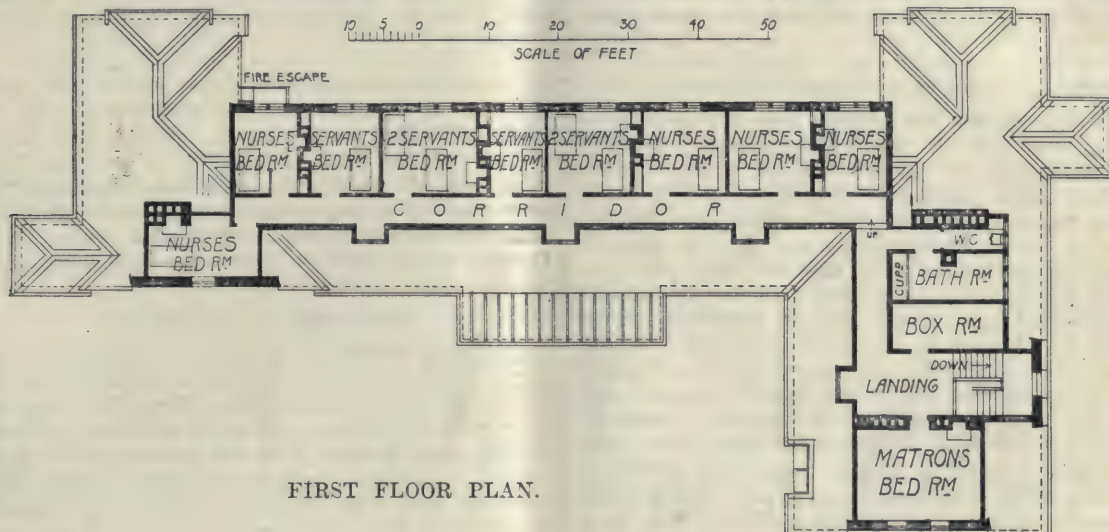
CONSTRUCTION AND ECONOMICS.

SOUTHPORT HOMŒOPATHIC HOSPITAL.

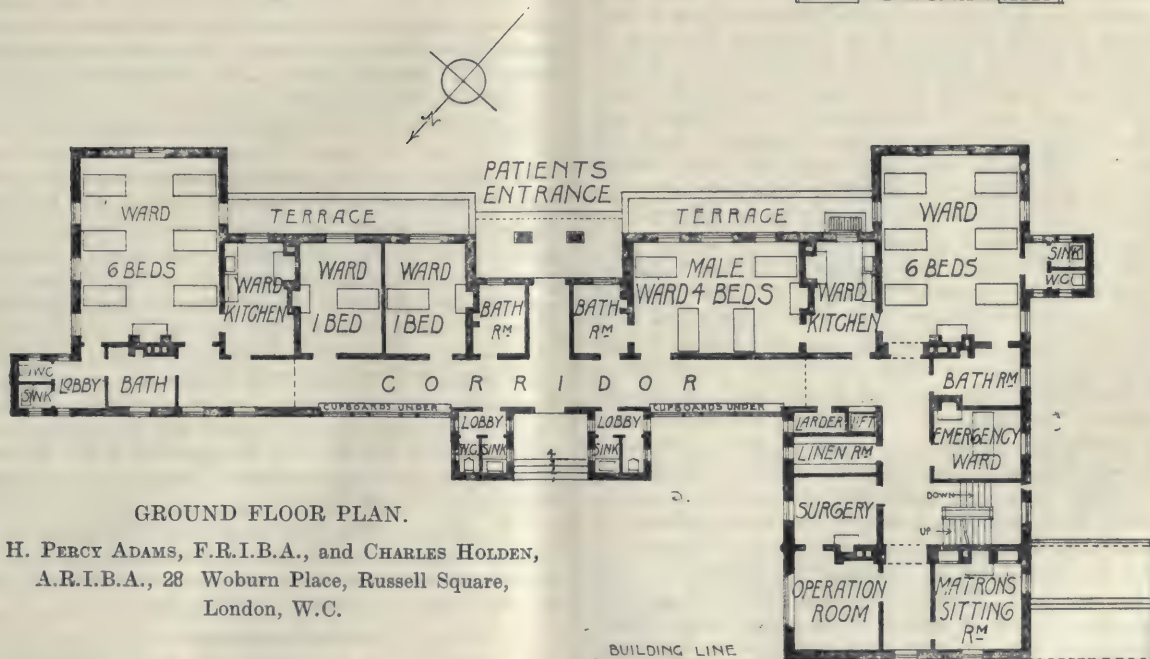
THIS small hospital has been built on the site of an old battery on the sand hills, and the irregular form of the ground has considerably influenced the plan. The building consists of three floors, namely, a basement under the whole of the west wing, and part of the east wing, with a subway for pipes connecting the two, ground floor, and upper floor over part of the ground floor.

emergency ward for one bed and two single wards presumably for paying patients. As the four-bed ward alone is definitely labelled "Male," we presume the other two large wards are to be used for male or female patients as occasion may arise.

There are no less than four bath-rooms on this floor, three of which open direct into the wards—an excellent



FIRST FLOOR PLAN.



GROUND FLOOR PLAN.

H. PERCY ADAMS, F.R.I.B.A., and CHARLES HOLDEN,
A.R.I.B.A., 28 Woburn Place, Russell Square,
London, W.C.

The west wing of the basement which is at the ground level on the south-west side contains the kitchen offices, entrance for staff, staff dining-room and heating apparatus. The basement under the east wing contains quarters for a married couple, and an ambulance house.

The ground floor, the main front of which faces south-east, contains two wards for six beds, one for four; an

arrangement, and much better than the plan of putting bath-rooms into projecting towers with intervening lobbies which are not required; but the provision of so many bath-rooms seems somewhat liberal, if not excessive.

There are two ward kitchens, and four sets of sanitary offices. The sink-rooms are much too small for the work that has to be done in them, and the sanitary spur to the

south-west large ward is a serious obstacle to the ventilation of the ward. In fact, the planning of the wards cannot be regarded as satisfactory, seeing that in each case one side wall of the ward along which three beds are placed has only one window. This is not the sort of planning which we expect from an architect of Mr. Percy Adams' experience.

The operation-room, with surgery adjoining, is placed in the north-west wing and faces north-east, and immediately facing it is the matron's sitting-room, not a particularly happy arrangement for the matron. The upper floor con-

tains the matron's bedroom, and rooms for four nurses and six servants, with a box-room and one bath-room to be used in common, we presume, by the matron and servants. It would surely have been better to have provided one bath-room for the matron and nurses, and one for the servants, and to have omitted one of the four bath-rooms for patients.

The whole cost of the building, including road making, laying-out grounds, and boundary fences, etc., amounted to the sum of £4,490—or a little over £236 per bed. A remarkably small sum, which seems to show that building must be very cheap in Southport. The architects were Messrs. Percy Adams and Holden.

NEW APPLIANCES AND THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

ENAMEL PAINTS FOR USE IN HOSPITALS.

PROBABLY not the least difficult problem which architects, governing bodies, and superintendents of hospitals have to solve is the decoration of the walls of wards, staircases, waiting-halls, etc. On the one hand it is important that the decoration shall have, as far as is practicable, a certain soothing effect upon those to whom it is the only outlook for many days and nights together, and on the other hand cleanliness and asepsis must be fully provided for. Modern taste in decoration has led to the development of a number of so-called enamel paints, which, when dry, have something of the appearance of enamel. Samples of two kinds of paints of this type have been submitted to us—"Paripan," made by Messrs. Randall Bros., of Palmerston House, E.C., and "Robbialac," made by Messrs. Jenson and Nicholson, of Stratford, E. Both firms appear to have worked at the problem in very much the same manner. Both have realised that the ordinary plaster, however good it may be, and however well laid on, is naturally a harbourer of germs, in the very fullest sense of the term. It is very porous, and, in addition, is very rough. As Messrs. Jenson and Co. point out, an examination of any plaster wall under the microscope would show a number of hills and dales, and the dales form good refuge for germs. With both forms of paint, the plaster or woodwork—they are applicable to pretty well every kind of surface—is first covered with a paint specially prepared for the purpose, called by the makers of "Paripan" "filling," and by the makers of "Robbialac" "stopping." The object of both paints is the same as that of the under-paints used by the ordinary decorator, but are intended to do the work very much more thoroughly. They are to fill up the pores and to reduce all the inequalities to one smooth surface. The makers of "Robbialac" recommend that the surface be rubbed over, after "stopping" has been applied. With both forms of paint, after the "stopping" or "filling" has been thoroughly well worked in, and a smooth, hard, non-porous surface has been produced, a second coat, again specially provided for the purpose, and called by the makers of "Paripan" "Undercoat," and by the makers of "Robbialac" "Mat Finish," is applied. It is claimed that the coating of the second paint gives a better gloss than ordinary paint employed in high-class decorative work. The makers of "Robbialac" recommend that the surface shall be again rubbed over to make it smooth. Above the surface of the second coat a third is applied, called by the makers of "Paripan" "Glossy," and by Messrs. Jenson and Co. "Robbialac." The result of the proper application of the three coats, following on the careful "stopping" of the pores of the plaster, woodwork, etc., and of the careful preparation of the surface,

is claimed to be a smooth, glossy surface that can be scrubbed or cleaned in any way that is convenient, that does not harbour dust or germs, and that is, in fact, in every way aseptic. "Paripan" has been used very largely at the London Hospital, and "Robbialac" has been used at the City of London Lying-in Hospital. Both are made in many colours, and Messrs. Jenson, in particular, keep a staff of skilled men for the purpose of arranging any desired colour.

SUMNER'S MILK COVERS.

We have received for examination a sample cover, designed for the protection of vessels containing milk or other food-stuffs from contamination by flies. This is a square piece of gauze-like cloth, weighted at each corner, and easily placed over the mouth of vessels containing fluid or solid food. An accompanying pamphlet, which includes extracts from the M.D. Thesis on the "Causation and Prevention of Epidemic Infantile Diarrhœa," by Dr. V. J. Glover, explains the purpose and method of application of these simple and effective protectors. The covers are manufactured by R. Sumner and Co., Ltd., wholesale druggists, of Liverpool, in three sizes, 5 in. by 4½ in. at 4s. per 100 (small); 8 in. by 8 in. at 6s. per 100 (medium); and 10 in. by 10 in. at 8s. 8d. per 100 (large). Thus it is possible to purchase these covers to fit any ordinary size of food vessel. In addition to the covers for vessels, cot covers, 4 ft. by 3 ft., at 4s. 6d. per dozen, are supplied for the purpose of enveloping a baby's cot with fly-proof material and preventing the contamination by houseflies of the mouths of breast-fed infants. Milk-contamination by house-flies has by now been definitely established as one at least of the modes of dissemination of epidemic infantile diarrhœa; and these covers, simple in use and quite inexpensive, seem to be a reasonable means of checking the spread of this and other fly-borne diseases. We understand that the makers have produced these articles with the approval of Dr. Glover, and that copies of their explanatory pamphlet are now being distributed amongst the medical officers of health throughout the country, with a view to securing their approval and practical assistance. The covers seem to us to be quite efficient and to afford a cheap and accessible means of limiting the ravages of diseases spread by flies.

PROFESSOR M. J. M. HILL, Sc.D., F.R.S., late Fellow of St. Peter's College, Cambridge, has been elected Vice-Chancellor of the University of London for the year 1909-10. The best thanks of the Senate have been accorded to Sir William Collins, M.P., M.D., F.R.C.S., the retiring Vice-Chancellor, for the services which he has rendered to the University during his two years' tenure of that office.

NEWS AND COMING EVENTS.

FLEET-SURGEON A. E. WEIGHTMAN, L.R.C.P., L.R.C.S., Ed., has been elected a Fellow of the Society of Antiquaries.

MR. BIRRELL recently unveiled in the Forbury Gardens at Reading the Memorial Cross in honour of King Henry I. which has been presented to the Corporation of Reading by Dr. Jamieson Boyd Hurry.

THE annual meeting of the Friedenheim Hospital (Home of Peace for the Dying) will be held this day, Saturday, June 26, at 3.30 p.m., in the Lecture Hall of the School for the Blind (adjoining Friedenheim), 10 Upper Avenue Road, Swiss Cottage, N.W. The chair will be taken by the Mayor of Hampstead, and he will be supported, amongst others, by Mr. John Langton, F.R.C.S. (Chairman of the Council), Dr. A. T. Schofield, and Dr. Percy J. F. Lush.

PRINCE ALEXANDER OF TECK was among the guests at the jubilee dinner of the National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, which was held recently at the Mansion House, under the chairmanship of the Lord Mayor of London. Among those present were Lord Justice Kennedy, the Sheriffs, Sir William Gowers, the Dean of Canterbury, Dr. David Ferrier, Sir Horace Marshall, and Sir Felix Seemon. The Chairman announced on the authority of the Duchess of Albany that the King had consented to open the new building on November 4, while the Princess of Wales would visit the hospital in October to receive purses for the jubilee fund, which aims at raising £50,000. Towards this some £15,000 has already been collected, and during the dinner donations were announced to the amount of £2,719.

MR. CHARLES ALFRED BALLANCE, M.V.O., has been appointed a member of the Court of Examiners of the Royal College of Surgeons of England. Mr. Rickman J. Godlee, F.R.C.S., has been appointed to represent the College on the Court of the newly constituted University of Bristol.

THE death of Miss Mary Hezmalhalch, of Felliscliffe, Yorks, permits an estate valued at £40,000 to be distributed under the will of her brother, Mr. Joseph Hezmalhalch, who died thirteen years ago. The many charitable legacies included £1,000 each to the Harrogate Bath Hospital and the Harrogate Cottage Hospital; £500 to the Leeds Hospital for Women and Children; £250 each to the Leeds District Nursing Institution, the Ida Convalescent Home, Cookridge, and the Ilkley Bath Hospital. Three-fourths of the residue of the estate were left to the Leeds Infirmary and one-fourth goes to the Leeds Dispensary.

THE sixth annual course of instruction in ophthalmology in connection with the University of Oxford will take place this year from July 5 to 17. The first part will consist principally of practical demonstrations in the examination of eye patients, and will include ophthalmoscope work and refraction testing. The second part will be more specialised, and will include lectures by eminent ophthalmic surgeons upon subjects with which, for the most part, their names are identified. The fee for the course is £5 5s. Medical men and students of ophthalmology must secure lodgings for themselves for the first week, but they can be provided with board and residence at Keble College at the rate of 7s. 6d. a day during the second week. All information concerning the course may be obtained from Mr. Robert W. Doyne, M.A., Margaret Ogilvie Reader in Ophthalmology in the University, 30 Cavendish Square, London, W.

THE Duchess of Connaught has promised her patronage for the open-air fête and bazaar to be held at Isleworth on June 30 and July 1, in aid of the building fund of the new hospital for Hounslow.

LORD SANDHURST, treasurer of St. Bartholomew's Hospital, has received from the Goldsmiths' Company a donation of £500 towards the funds of the hospital in response to an appeal to the City Guilds for assistance in paying off the hospital's existing debt.

THE annual tournament of the Medical Golfing Society was held at Burnham Beeches Golf Club on Thursday, June 24. The "Henry Morris" Challenge Cup and the Medical Golfing Society's Gold Medal were competed for, and there were also sweepstakes and other competitions in the afternoon. Any person on the Medical or Dental Registers can join the Society on payment of the annual subscription (4s.), which includes entrance to the tournament. Applications should be sent to Mr. L. Eliot Creasy, 36 Weymouth Street, London, W.

THE election of examiners for the ensuing collegiate year of the Royal College of Surgeons of England has resulted as follow: *Primary Fellowship*—Anatomy: F. G. Parsons, Arthur Thomson, C. H. Fagge, James Sherren; Physiology: W. H. Thompson, G. A. Buckmaster, C. F. Myers-Ward, E. W. Wace Carlier; *Conjoint Board*—Elementary Biology: T. W. Shore, J. P. Hill; Anatomy: W. Wright, W. H. Clayton Greene, Arthur Robinson; Physiology: Benjamin Moore, E. H. Starling; Midwifery: W. Rivers Pollock, W. W. Hunt Tate, H. J. M. Playfair, J. H. Targett; Public Health (Part I.): H. R. D. Spitta; (Part II.): R. D. Sweeting.

At the last meeting of the Council of the Pharmaceutical Society of Great Britain, Mr. J. F. Harrington, of Kensington, was elected President in succession to Mr. J. Rymer Young, F.C.S., and Mr. W. L. Currie, of Glasgow, was elected Vice-President. The Hanbury Gold Medal, which is awarded biennially for high excellence in the prosecution or promotion of original research in the chemistry and natural history of drugs, has been awarded to Wilhelm Oswald Alexander Tschirch, Professor of Pharmacognosy and Practical Chemistry at Berne University, who was elected thirteen years ago an honorary member of the Pharmaceutical Society. In 1890 Professor Tschirch was appointed Extraordinary Professor of Pharmacognosy in the Faculty of Medicine at Berne, and succeeded to the chair in 1891.

THE Royal Society has approved a scheme for the administration of a Sorby Research Fellowship which has been established in connection with the University of Sheffield. Dr. H. C. Sorby, who was born in Sheffield, left £15,500 for the establishment of a Fellowship for the purpose of carrying out original scientific research. The decision of the Royal Society is to the effect that this Fellowship shall be associated with Sheffield University, so long as, in the opinion of the Society, that University is efficiently equipped in laboratories and appliances. The administration of the fund is vested in a committee consisting of three representatives of the Royal Society, one representative of the Council of Sheffield University, and two representatives of the Senate of that University. The Council of the University has appointed its Vice-Chancellor, Sir Charles Eliot, as its representative, and Professors Hicks and MacDonald have been appointed to represent the Senate.

LORD ROTHSCHILD will preside at the first annual meeting of the members of the Association of Subscribers to Charities at the Mansion House on Thursday, July 1, at 3 p.m. Lord Lichfield, Lord Avebury, Lord Brassey, and others will be among the speakers.

THE President of the Board of Education has appointed Dr. Ralph H. Crowley, M.D., M.R.C.P., to be an Assistant Medical Officer of the Board. Dr. Crowley, who was for some time honorary physician of the Bradford Royal Infirmary, at present occupies the post of medical superintendent of the Bradford Local Education Authority.

THE Council have appointed Miss Kate Brown, M.B., B.S., to be Demonstrator in Anatomy and Curator of the Museum in the London School of Medicine for Women. Lady Northcote will present the prizes and certificates to students for 1908-9 on Friday, July 2, at 4 p.m., when Mrs. Garrett Anderson, M.D., will take the chair.

THE first annual dinner of the Society of Tropical Medicine and Hygiene founded two years ago was held on June 18 at the Trocadero Restaurant, London, under the chairmanship of Professor Ronald Ross, C.B., F.R.S. Col. Seely, in proposing the toast of "The Society," referred to the debt which the public owes to the society for its efforts towards abating the diseases of tropical countries. Sir Alfred Jones stated that Liverpool has spent £100,000 on investigations into tropical diseases, and £28,000 in sending out expeditions. Sir Rupert Boyce pointed with satisfaction to the widespread adoption of the principles of tropical sanitation, as first enunciated by Sir Patrick Manson. The Chairman said that the society now numbers nearly 350 members, most of whom are at work in the tropics. He expressed the hope that this country, which has led the way in research in tropical medicine, would now lead the way also in the practical application of those researches. Other toasts and replies were given by Sir Patrick Manson, Sir Archibald Geikie, Mr. Henry Morris, Count Mörner, and Mr. Ramsay Macdonald, M.P. The following telegram was forwarded to Mr. Chamberlain: "The Society of Tropical Medicine thanks you for the great services to tropical medicine rendered by you. Sent at the first banquet of the Society.—RONALD ROSS, President."

A COMPLIMENTARY dinner was given at the Grand Hotel, London, last week, to Dr. J. F. W. Tatham on his retirement from the post of Superintendent of Statistics at the General Register Office. Sir Shirley Murphy was in the chair, and he was supported by Sir W. Dunbar (Registrar-General), Mr. Brudenell Carter, and many prominent members of the medical profession and public health service. The arrangements were in the hands of Drs. W. H. Hamer and Herbert Jones. The Chairman submitted the toast of the evening, and spoke in terms of warm appreciation of the guest and his career. He related how Dr. Tatham prepared in 1892 the Manchester life table, the first ever made in relation to any local community. To Dr. Tatham also is due the origination of the present system of weekly and quarterly returns of the Registrar-General giving particulars of notified diseases occurring within the areas of the various medical officers of health. During his 15 years' work at Somerset House he introduced considerable improvements in the classification of the causes of death. Dr. Tatham was a valued member of the Committee on Nomenclature of Diseases of the Royal College of Physicians, and of the Departmental Committee on Physical Deterioration; and he was chairman of the Statistical Committee of the Cancer Research Fund. Dr. Tatham will be succeeded by Dr. Stevenson. The chairman's eulogy was warmly endorsed by the Registrar-General, to whom Dr. Tatham, in responding, paid a generous tribute.

THE honorary secretaries of King Edward's Hospital Fund for London have received at the Bank of England, under an order of the High Court, the sum of £7,348 17s. 2d., the residuary estate of the late Mr. Thomas John Bell, bequeathed for charitable purposes.

ON the occasion of the Health Congress to be held at Leeds in July the honorary degree of LL.D. will be conferred by the University of that city on the president of the congress (Colonel T. W. Harding) and the honorary degree of D.Sc. on Sir James Crichton-Browne and Major Ronald Ross.

PROFESSOR JOHN CHIENE, C.B., F.R.S., and F.R.C.S. Ed., LL.D., etc., who has held since 1882 the Professorship of Surgery in Edinburgh University, has applied for permission to retire. The University Court, in granting the application, has agreed that the resignation shall take effect from August 31.

DR. PAUL LANGERHANS, for 14 years president of the Berlin Municipal Council, died last week in his 90th year. Dr. Langerhans was for many years a member of the Prussian Diet, and in 1881 was elected to the Reichstag, of which he remained a member until 1903. He was an intimate friend of Virchow, and among many civic and political distinctions he received the freedom of the city of Berlin in the Year 1900.

SIR FELIX SEMON, K.C.V.O., Physician-Extraordinary to the King, is retiring from practice, and the occasion will be marked by a complimentary banquet to be given him by his professional and other friends on Friday, July 2, at the Whitehall Rooms, Hôtel Métropole, at 7.45 p.m. punctually. The organisers of the banquet are anxious to found a lectureship or scholarship in his name, to be a record of his scientific work as one of the founders of the British School of Laryngology. Mr. Henry T. Butlin, F.R.C.S., D.C.L., will preside at the dinner, and all communications with regard to the Testimonial Fund should be addressed to the hon. secretaries: Mr. Alfred Mond, M.P., 35 Lowndes Square, S.W.; Dr. P. Watson Williams, 4 Clifton Park, Bristol; Mr. H. J. Davis, 8 Portman Street, London, W. The price of tickets for the banquet is £1 ls. inclusive, and ladies as well as gentlemen are invited. Mr. H. J. Davis is the acting hon. secretary to the Dinner Committee, and it is requested that applications for tickets for the banquet should be addressed to him. Cheques for the tickets should be sent with applications.

EDITOR'S LETTER-BOX.

ANSWERS TO CORRESPONDENTS.

MISS C. F. HATTON is thanked for the reference kindly sent to this office, which has been forwarded to the source of the inquiry.

E. A. C.—The condition mentioned probably has no effect on sexual feeling, and must of necessity be of the nature of a developmental error. Precise information as to the nature of the condition cannot be given from so short a description without seeing the actual parts. It is quite unusual for the clitoris to be divided in the manner described, variations in length and size being the only common malformations. The significance of this condition would be influenced by the condition of the internal sexual organs, the presence or absence of uterus and ovaries, and other sexual characteristics.

DR. SINCLAIR.—We believe that Dr. Selig's paper is not published in full in any English medical journal; but we are communicating with the author of our abstract, and will endeavour to supply you shortly with all available information.

NURSING ADMINISTRATION.

THE COST OF THE HOSPITAL NURSE.

THE cost of the nursing department is intimately bound up with its efficiency. Strange to say, lavish expenditure is rarely, if ever, found marching hand in hand with a high general level of performance, and although the best results can never be attained where a department is starved of the things necessary for its proper expansion, yet the all-pervading supervision which ensures that everyone in the establishment is doing the best work of which they are capable, exhibits itself most surely in keeping down unnecessary expenditure. Extravagance is the unfailing indication of feeble administration, which will not long be confined to questions of the purse.

The recent edition of *Burdett's Hospitals and Charities** has an exceptionally full chapter on the cost of the nursing department in 1907, the year to which all the figures in the volume relate. The figures collected through the courtesy of the matrons and secretaries throughout the country enable a good idea to be formed in regard to the cost of both nurses and nursing. Comparison is rendered possible by adding the amounts spent on nurses' board, uniforms, laundry, salaries, and pensions or premiums. This total is divided by the average number of nurses in residence, to give the average cost of each nurse to the institution, and is divided by the average number of occupied beds to give the average cost of nursing per bed. It must be at once explained that this estimate of cost necessarily fails to take into consideration a number of additional expenses incurred on behalf of the nursing staff in the nursing home. These collective sums include the cost of service, rent, taxes, water, coal, lighting, domestic upkeep, furnishing, repairs, etc., etc. They are omitted in the calculation, because hardly any hospitals keep the accounts of the nurses' home separate in these particulars from those of the hospital. It is much to be regretted that this is so, for the nurses' home is now almost invariably, in large hospitals, an entirely separate establishment, and its budget ought to be made out in distinct form so that managers could clearly ascertain how much it costs, and how much it ought to cost. At one or two exceptionally well administered hospitals the accounts of the nurses' home are available in separate form, and the "Annual" quotes that of Guy's Hospital, from which it appears that an average sum of £7.3 per head was expended on these collective items in 1907, and the sum of £6.9 in 1908. As these amounts do not include any expenditure on rent, the Nurses' Home at Guy's Hospital being built on the hospital premises, it may be safely reckoned that an average amount of at least £10 should be reckoned on to the total cost of nurses per head, in the following estimates. The figures given furnish, nevertheless, however incomplete, a good test of economy. If some items in the household are kept at a low level it is not likely that others will be excessive. If the cost of

the housekeeping for board is reasonable, it is improbable that coal and gas are wasted, or that too many servants are employed. To the practised eye of the critic it is sufficient to glance at one page of a book to gauge its general style, and it is true of the housekeeper that she may be tested by examination of any one of her departments.

For purposes of comparison it is more satisfactory to take the average cost of each nurse, rather than the average cost of nursing per bed. It should be quite possible, by taking pains, for all hospitals in their own class to arrive at very much the same average in respect of the cost of their nurses. Salaries are much on the same level in hospitals presenting the same description of work. Board is purely a question of management. Uniform and laundry differ but little. But the wide distinctions in administration between one hospital and another render it impossible to fix an exact average of the number of nurses required in proportion to the beds, and hence, when the millennium of hospital management shall arrive, and perfect economy reign in every department, the average cost of nursing per bed will still show wide distinctions. The following table shows the average cost of the nurses per head, arranged in ascending order, for the leading hospitals with medical schools in the United Kingdom. An addition of from £1 to 30s. must be made for hospitals with an asterisk, as their figures do not include the cost of uniform:

	Daily Average Number of Occupied Beds	Total Nursing Staff	Average Cost of Nurses per Head £
LONDON :—			
Guy's	515	251	35.6
University College	244	103	41.6*
Royal Free	138	62	44.1
King's College	189	87	45.6
St. Mary's	257	112	48.1
St. Bartholomew's	575	238	50.7
Middlesex	270	117	52.3
St. Thomas's	480	192	53.0
St. George's	319	147	53.3
London	792	441	52.7*
PROVINCIAL :—			
Oxford Radcliffe Inf....	116	41	35.7
Birmingham General	305	106	39.5
Birmingham Queen's	121	44	40.3†
Cambridge Adden- brooke's	107	37	42.1†
Leeds General Inf. ...	368	95	42.9†
SCOTTISH :—			
Dundee Royal Inf. ...	276	94	35.5
Edinburgh Royal Inf.	832	272	37.6
Glasgow Western Inf.	544	176	39.3
Aberdeen Royal Inf.	226	81	38.3*†
Glasgow Royal Inf. ...	593	170	45.3
IRISH :—			
Belfast Royal Victoria	223	77	39.8

* Minus cost of uniforms.

† Board estimated.

It will be noted that there is a difference of £17.1 between the maximum and minimum in London, of £7.2 in the provinces, and of £9.8 in Scotland. It is certain that were all the collective items of the nursing homes available for comparison these differences would be much wider. As they stand they cannot be considered satisfactory.

* *Burdett's Hospitals and Charities*, 1909, being the Year-book of Philanthropy and the Hospital Annual. (The Scientific Press. Price 7s. 6d. net.)

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, JUNE 28 to JULY 3.
ROYAL SOCIETY OF MEDICINE, 20 Hanover Square, W.

At 8 p.m.

June 28, **Odontological Section.** Paper, Mr. Percy Pickerill: "Radicular Aberrations."

Casual Communications.

Mr. J. T. Carter, "A Note on the Ameloblast Cells in Esophagus."

Mr. W. James and Mr. J. G. Forbes, "An Epithelial Odontome."

Mr. J. L. Payne, "An Interdental Splint."

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich, S.E.

At 3.15 p.m.

June 28, Mr. Wm. Turner, **The After-treatment of Cases of Abdominal Section.**

At 2.15 p.m.

June 29, Dr. R. Wells, **Points in the Diagnosis and Treatment of Aortic Disease.**

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

June 29, Mr. Armour, **Surgery of the Nervous System.**

July 2, Dr. Jas. Taylor, **Clinical Lecture on the Spinal Cord.**

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

June 29, Dr. R. M. Leslie, **The Influence of Sex in Disease.**

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.

At 4 p.m.

July 1, Dr. Hutchison, **Colitis in Childhood.**

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.

At 3.45 p.m.

June 29, Dr. Andrew Wylie, **The Larynx.**

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

June 28 and July 1, **Surgical Registrar, Demonstration.**

July 2, **Medical Registrar, Demonstration.**

At 12 noon.

June 28, Dr. Bernstein, **Pathological Demonstration.**

At 12.15 p.m.

June 29, Dr. Pritchard, **Practical Medicine.**

June 30 and July 3, Dr. Grainger Stewart, **Practical Medicine.**

At 5 p.m.

June 28, Mr. Pardoe, **Diagnosis of Surgical Diseases of the Urinary System.**

June 29, Mr. Etherington-Smith, **Clinical Lecture.**

June 30, Dr. Low, **Bilharziosis.**

July 1, Mr. Dunn, **Cases of Eye Diseases.**

July 2, Dr. Seymour Taylor, **Valvular Disease: Aortic Regurgitation.**

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 5.15 p.m.

June 28, Dr. F. J. McCann, **Irritable Bladder.**

June 29, Mr. T. H. Openshaw, **The Treatment of Lateral Curvature.**

June 30, Dr. C. Riviere, **The Diagnostic and Therapeutic Use of Tuberculin.**

July 1, Dr. Jas. Collier, **Aphasia according to the New Doctrine.**

At 4 p.m.

June 28, Dr. J. H. Sequeira, **Skin.**

June 29, Dr. Essex Wynter, **Medical.**

June 30, Mr. Mower White, **Surgical.**

July 1, Sir Jonathan Hutchinson, **Surgical.**

July 2, Mr. Hunter Tod, **Ear, Nose, and Throat.**

LITERARY NOTES.

We have received from the National Food Reform Association, 40 Chandos Street, Charing Cross, London (temporary address), a booklet containing an unpublished memorandum on "The Dietetic Treatment of Inebriety," submitted by it to the recent Departmental Committee, as well as important letters from the Dean of Durham, Sir Thomas Barlow, Mrs. Bramwell Booth, the Rev. Dr. Paton, Drs. Haig and Kellogg. A specimen copy will be sent post free by the Secretary on the receipt of three penny stamps.

We learn that the friends of the late Mr. H. L. Barnard, F.R.C.S., whose untimely death, last year, at the age of forty-one, was deplored by the London Hospital in particular, and by the surgical world in general, have decided to publish as a memorial his entire contributions on Abdominal Surgery in book form. In 1900 Mr. Barnard projected this volume of collected surgical papers, and two former pupils, Dr. F. Wood-Jones and Mr. Stanley Beale, undertook the task of illustration. The editorship of this work, which was almost finished when death intervened, is in the hands of the late author's colleague, Mr. James Sherren, and Dr. H. H. Bashford will contribute the biography. The cost of publication, etc., is estimated at £200, and the Memorial Committee appeals to Mr. Barnard's friends and pupils for subscriptions, which should be sent to the Hon. Secretary and Treasurer, Dr. Cecil Wall, 6 Cavendish Place, W. We are certain that this volume will possess merits, intrinsic and extrinsic, which should ensure for it a very wide circulation.

A new edition of Dr. Burton-Fanning's "Open-Air Treatment of Pulmonary Tuberculosis" (Modern Methods of Treatment Series) is announced by Cassell and Co., Ltd. In this edition the author deals with the researches of Sir A. E. Wright and his collaborators, as well as with the new methods of early diagnosis, including Calmette's ophthalmoreaction.

We have received from the publishers, 30 Fleet Street, London, E.C., a copy of "Holidays Abroad," an illustrated booklet to a series of tours in less-known districts of Holland, North Germany, the side valleys of the Rhine, the Belgian Ardennes, and the Tyrol, easily and inexpensively reached by the Great Eastern Railway Company's Harwich route to the Continent.

THE HOSPITAL

JUNE 26, 1909.

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The Hospital

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NEW SERIES. No. 123, VOL. V. [No. 1195, VOL. XLVI.]

SATURDAY, JULY 3, 1909.

THE RELATIONS OF CANCER TO CHRONIC INFLAMMATION.

ALTHOUGH we are still ignorant of the factors which determine the assumption of malignancy by epithelial cells, it has long been known that chronic inflammations are common precursors of cancer. The association of cancer with gall-stones, gastric ulcer, and leucoplakia of the tongue are familiar examples, while nothing can be more conclusive in this respect than the so-called "kangri cancer" of the abdominal wall alluded to in the last report of the Cancer Research Fund. It will be remembered that the natives of Kashmir are in the habit of carrying suspended round the waist a small earthenware vessel called a kangri. This vessel contains a charcoal fire, and is used for the sake of warmth. Its consequences are repeated burns upon the anterior wall of the belly, and a chronic irritation of the skin, upon which squamous carcinoma is frequently implanted, although carcinoma in this situation is a rarity in other parts of the world. It would be easy to multiply examples testifying in the same direction; but this is unnecessary, for the fact that some relation does exist between chronic inflammation and cancer must be accepted as past all question. The nature of the relation is the subject of an excellent and thorough communication by Dr. Victor Bonney appearing in the Seventh Report from the Cancer Research Laboratories of the Middlesex Hospital.

It is an invariable thing to find a cellular infiltration of the connective tissues adjacent to areas of primary carcinoma, but opinion has been divided as to its rôle. One school holds that the inflammatory exudate is entirely secondary and evoked by the irritant action of the proliferating carcinoma cells: the other, that the phase of chronic inflammation paves the way for the malignant proliferation, exercising some definite though unexplained influence over the assumption of malignant characters by the epithelial cells in the neighbourhood. Dr. Bonney's researches, it may be said at once, seem to show conclusively that the inflammatory phase is the precursor and not the successor of the malignant. He finds that in admittedly precarcinomatous conditions such as leucoplakia upon the tongue or vulva, the microscopical picture of the sub-epithelial tissues is identical with that of the connective tissue which surrounds the early down-growths of primary carcinoma. It is

characterised by an infiltration of the sub-epithelial connective tissue by lymphocytes and plasma-cells in abundance, the infiltration being attended by a destruction of the normal elastic tissue of this situation. These two features appear to be constant and are beautifully illustrated by a number of plates. Into the de-elasticised and cellular layer descend the epithelial down-growths which evidence the commencement of the stage of malignancy. That the changes in the sub-epithelial tissues in some way play the part of a condition precedent to the exercise of malignant characters by the epithelial cells overlying them appears to be established, though the "how" remains a secret. But once malignant attributes are assumed, the subsequent spread of the disease, whether this be effected by an advanced extension of the primary growth, or by metastases, appears to be independent of pre-existing alterations in the neighbouring connective tissue. Here the invaded tissues play an entirely passive part. There is no cellular infiltration, and the histological evidence is strongly against the existence of any qualities in a cancer cell capable of exciting an inflammatory tissue-reaction. This difference in the behaviour of the connective tissues appears to supply an insuperable argument in favour of Dr. Bonney's view, that the inflammatory processes constantly found in areas of primary carcinoma are in truth pre-carcinomatous, and not secondary.

It is a singular circumstance that, although the inflammations leading up to the pre-carcinomatous stage vary greatly in type, this stage exhibits the same cytological and histological picture whenever it occurs. The predominant items are, as has been said, destruction of normal elastic fibres, and an accumulation of plasma-cells and lymphocytes, to the exclusion of such common types of inflammatory cells as the polymorphonuclear and large hyaline. Over this altered tissue, lies an epithelial layer, which, though at this stage generally thinner than the normal, yet presently becomes endowed with a capacity for proliferation intrinsically, to all appearance, illimitable.

It is a well-established fact that squamous-celled carcinoma, in all respects identical with the common types of this growth, but of somewhat abnormally reduced malignancy, is occasionally a complication of

x-ray dermatitis; and this disease, owing to its accessibility and the long duration of its innocent phase, offers peculiar advantages for the study of the histological changes preceding the establishment of malignancy. Mr. Cecil Rowntree, in the same issue of the "Archives of the Middlesex Hospital" gives a good account of these changes. The chief points in the clinical course of the malady, as given by Dr. Hall Edwards, who has himself suffered severely, are as follows: "The disease, so far as the hands are concerned, makes its first appearance as an erythema round the base of the nails. The skin becomes uniformly red; and, later, small warty growths appear, which gradually increase in size and number, the skin at the same time becoming dry and wrinkled. . . . The bases of some of the large warts become inflamed, and the thickened mass comes away, leaving an ulcer which takes months to heal. . . . It is ulcers of this type which occasionally entirely refuse to heal, become gradually larger, and assume malignant characters." Mr. Rowntree was able to obtain material illustrating the structural features associated with the warty condition above described, at a stage before ulceration had appeared.

The patient was a man who, after constant daily exposures to the x-rays for three years, developed dermatitis of the hands, and began to suffer severe pain in a wart on his right index finger. This wart slowly grew, and three years later was removed on account of the pain it gave. Microscopically the wart was a simple papilloma. There was no actual invasion of the corium, but the deeper layers of epithelial cells were irregularly arranged. The underlying elastic tissue had disappeared, its place being taken by an infiltration of lymphocytes and plasma cells—a type of tissue, therefore, corresponding exactly with that described by Dr. Bonney as the immediate antecedent of malignant epithelial down-growth. Such researches as these, combined with what we know of carcinoma from the clinical standpoint, make it quite clear that there is no specificity about the kind of irritation which leads up to carcinoma. Mechanical, physical, and bio-chemical agents seem to be equally endowed with the sinister quality of preparing the tissues for carcinomatous invasion, and the final stage in these preparations is a distinctive and unvarying modification of the sub-epithelial structures.

REST AND PAIN.

FIFTY years ago, in the peroration to his classical lectures "On the Influence of Mechanical and Physiological Rest, and the Diagnostic Value of Pain," John Hilton said: "There is no field open to the future inquirer, from which he will reap a richer reward in the benefit of his race and profession, than from the persevering attempt to interpret the purport and true significance of the manifold pains, by which Nature admonishes us of hidden and otherwise imperceptible evils."

It is open to question how far this forecast has been verified by the event. As to the amount done in this field there can be no two opinions. Probably every practising medical man of to-day makes use, consciously or unconsciously, of the results of work for which the names of Mackenzie and Head may stand typical. The expert neurologist to-day has at his command a large-scale and most detailed map of the nervous system to facilitate his orientation of organic lesions, and he is beginning to know something about the anatomical representation of psychical phenomena. We can all talk glibly enough of "McBurney's spot" and "Robson's point," and we know something about the area of origin and irradiation of renal and biliary and gastric pain; but, with increased facilities for the allocation of pain, tenderness and paræsthesiæ to their anatomical correlations, it is doubtful if we have not lost or are not losing the powers of observation and of memory which enabled the older clinicians to anticipate the findings of these latter days. The advance of chemistry has

enormously increased our capacity for abolishing pain irrespective of its cause; and, though occasions arise when all the analgesics within and without the pharmacopœia fail to relieve pain, yet for the most part there is nowadays a tendency to think first of the annihilation of pain, and then, if at all, of its significance. It seems to be a dictate of civilisation.

The fact of the matter is, that all the work done on the lines indicated by Hilton has only revealed the extraordinary complexity of the whole subject; and before the bewildering intricacies of the possible anatomical explanations of subjective phenomena like pain, the busy practitioner recoils upon overt probabilities. Then again "rest" is just as much the fundamental principle of all treatment as it was in the days of Hippocrates; but we find ourselves in a period of reaction from the practice that followed upon the invaluable lessons so well crystallised in these very lectures. Splints and reclining boards and the stringent interdiction of exertion, have given place to massage and gymnastics and graduated exercise. We still rely no less upon the *vis medicatrix naturæ*, but we go further; we search the inner mechanism of natural forces of recuperation and stimulate them with all our power. To a conception of the ultimate nature of pain we are probably but little nearer; current ideas of rest are occidental, if not paradoxical; but the conditions of modern life commonly preclude any metaphysical hindrances, whilst anatomy and physiology, those freedmen of Medicine, are similarly prevented from undue domination.

ANNOTATIONS.

The Darwin Centenary.

THOUGH Charles Darwin was not a member of the medical profession, there is assuredly no branch of science, apart from those of biology and geology in which he was himself so expert, in which the effect of Darwin's lifework has been so far reaching as in that of medicine. Inductive philosophy was not, of course, unknown or even unfamiliar before the appearance of the *Origin of Species* fifty years ago; it would be strange if in the motherland of Bacon such a thing could ever happen. But there is no doubt that as far as therapeutic science was concerned, it was insufficiently appreciated. The patient accumulation of every fact which could bear upon a given problem, the laborious testing of every link in the chain of argument, in fact all the philosophic qualities displayed in Charles Darwin's works in so conspicuous a degree, have consciously or unconsciously influenced all those workers whose researches have revolutionised medicine and surgery in the last half-century. Pasteur, Lister, Koch, and many others, are all disciples of Darwin, in that his example and his methods are the familiar patterns of what those of a scientist should be. Physiology and even perhaps pathology, as well as zoology and botany, have been profoundly influenced by the theory of evolution; comparative anatomy is practically a product of Darwin's conceptions, and the whole science of human anatomy, including embryology, has been illuminated by a flood of light from the same source. No medical student can complete—indeed, he can scarcely even commence—his studies without being brought constantly into contact with Darwin's work or its results; and, if it would be too much to assert, that every one of them has read one or more of the classic treatises in which that work was set before the world, this, is at least, we imagine, true of the majority. Beyond and above his eminence as a scientist, Darwin was also the very type of an English gentleman. On both accounts it is well that Medicine should have been represented at the Cambridge celebrations of the centenary of his birth: Charles Darwin's memory is indeed well worthy to be kept green by our profession.

Birthday Honours and the Medical Profession.

FEW will deny that the medical profession as a whole is accustomed to look forward, when it thinks about the matter at all, to the periodical announcements of titles and other marks of Royal favour, with interest and a sense of pleasurable anticipation. And it is hard to recall any publication of Birthday or New Year's Honours which hurt the feelings of the medical world, or called forth protest or ridicule within its ranks. Fortunately, it is not yet a popular prank with idle mischief-makers to analyse these rolls of honour, with a view to invidious contrasts between the distinctions apportioned to the several professions and branches of public service. The medical Birthday Honours for 1909 are distributed, wisely and with a due sense of proportion,

amongst men who have done good work in diverse regions of medical activity. These men include clinicians, scientific investigators, public servants in various departments at home and abroad, and representatives of governing medical corporations. All have done solid work on behalf of the progress and honour of medicine; and all have achieved something for the benefit of the community. The many medical men who have worked under them, or profited by the published results of their labours, will read with special pleasure of the elevation of Sir Dyce Duckworth to a baronetcy; the conferment of a similar honour upon Mr. Henry Morris, the distinguished president of the English College of Surgeons; and the knighthood of Lieut. Colonel Leishman, who has done so much to advance the scientific reputation of the Royal Army Medical Corps. The promotion of Surgeon-General L. D. Spencer to be K.C.B. is a tribute to many years of good work in the Indian medical service; while Professor W. J. R. Simpson's efforts towards plague prevention, and on behalf of Colonial hygiene generally, have earned him the C.M.G. Another knighthood, though not of a medical man, will in the future gain more and more appreciation from our profession, as the pioneer work in the field of Eugenics of Mr. Francis Galton, the cousin of Darwin, bears more and more fruit. Military medical service at home has gained the C.B. for Surgeon-General H. R. Whitehead and Colonel de Burgh Birch; while, in India, Lieut.-Colonel R. N. Campbell, I.M.S., and Mr. Edgar Thurston have each received the C.I.E.—the one for military service and the other for ethnological research—and a native practitioner, Dr. Nariman, has been awarded the Kaiser-i-Hind medal.

Illegal Operations.

IN view of the very great difficulty which attends the detection and conviction of those who, whether medically qualified or not, perform illegal operations, it is satisfactory to note the exemplary punishment meted out on June 25 at the Central Criminal Court to William Arthur Jones, "calling himself a doctor," who was sent to penal servitude for ten years for this offence. This man was struck off the Medical Register in 1902 for practices of a similar kind, and it is clear that society is well rid of him for a considerable space of time. On the same occasion sentence of three months was passed upon the man who had suggested to the patient the operation in question, and arranged for its performance; in view of the fact that the woman was a domestic servant in his house, this prisoner must be regarded as extremely lucky to escape with so comparatively light a punishment. It does not appear from the brief newspaper report whether any extenuating circumstances existed with regard to this particular prisoner; but on general grounds the person who suggests and procures such crimes should be held but little less culpable than he who actually carries them out.

MEDICAL OPINION AND MOVEMENT.

AN interesting paper on the Functions of the Omentum was recently read before the Académie Royale de Médecine de Belgique by Heger and Heger-Gilbert. In a first series of experiments, a few c.c. of physiological salt solution, in which animal charcoal had been suspended, were injected into the peritoneal cavity of various animals. Care was taken to spread the solution over the whole of the peritoneum. The particles were subsequently found to have collected in the omentum, which had become thicker than normal. Microscopical examination showed the leucocytes, which were extremely abundant, to be engaged in an active phagocytosis of the charcoal particles. This action took place in both the lesser and greater omentum. In a second series of experiments metallic particles were used instead of charcoal, and a series of radiographic pictures taken. The photographs showed the gradual accumulation of the metal in the omentum, a fact which was subsequently verified post-mortem. On the other hand, in animals such as young rabbits, in which the omentum is ill-developed, the metallic particles remain scattered throughout the abdominal cavity. The same is true of animals—e.g. the frog and fish, in which the diaphragm is absent. In a third series of experiments larger foreign bodies, such as glass beads, particles of lead and cork were introduced. As a rule these were rapidly encysted by the omentum, which hypertrophied in their neighbourhood. The glass beads were in some cases seen to travel along the lymphatic channels and to accumulate near the great curvature of the stomach. Some even collected near the origin of the thoracic duct. Heavier foreign bodies, such as lead particles, do not migrate in this manner, but become encysted *in situ* by the omentum. These encysted bodies eventually leave the omentum, and may be found almost anywhere in the abdominal cavity, a fact which may explain the presence of "foreign bodies" sometimes found in the abdomen at autopsies. Occasionally the encysted bodies ulcerate through an adjoining coil of intestine and are passed per rectum, a general infection being prevented by omental adhesions. The authors were also able to show by experiments that a similar protective function to that of the omentum is possessed by the large ligaments of the female pelvis.

AUTOSEROTHERAPY, a proceeding first advocated by Gilbert, consists in the subcutaneous injection into a patient of a few c.c. of his own pleural effusion, to stimulate the rapidity of resorption of the whole effusion. Schnutgen in the *Berliner Klinische Wochenschriften*, describes the results he has obtained by this method of treatment, his conclusions being as follows. The method hastens the resorption of acute pleural effusions, which is completed in a couple of weeks in slight cases. It has a much more important, and, especially, a much more regular action in stimulating resorption than has ordinary exploratory puncture. It can be employed at the onset without any risk of the effusion increasing or relapsing, even when such inflammatory signs are present as ordinarily contra-indicate exploratory

puncture. Immediately after its first application the quantity of urine passed increases, and may even become double. When tried in cases of sero-fibrinous pleurisy both of tuberculous and other origin, the results are excellent. Suppurative and hæmorrhagic pleurisy, as well as hydrothorax, with or without ascites, are in no way influenced by the treatment. The good effects obtained are due partly to the mechanical stimulus of the exploring needle, but in the main to the antitoxic and bactericidal bodies contained in the effusion, which are put into the circulation by this method. The author advises that 1 c.c. of the fluid should be withdrawn from the chest and injected subcutaneously. This is repeated every second day, and from three to six times in all, according to the severity of the case.

THERE appears in *L'Echo Médicale du Nord*, from the pen of Paquet, an article in which he discusses the Use of Blood-serum in the Treatment of the various types of Anæmia. Horse-serum was used in the cases upon which he bases his conclusions, this being administered either subcutaneously or by the mouth. Equally satisfactory results would seem to have ensued whichever method was adopted. The effect of the administration, as shown by blood examinations, was to increase rapidly the number of red corpuscles per cubic millimetre without, however, increasing the hæmoglobin index at a corresponding rate. An augmentation of red cells was also observed in healthy individuals submitted to a similar course of treatment; but this increase was quite transitory, which is in marked contrast with the results obtained in cases of chlorosis, where an increase of these cells above the normal was noted as late as two months after an injection. The forms of anæmia, in which the best results were obtained, are those of chlorosis, that following loss of blood from trauma, hæmatemesis, metrorrhagia, post-partum hæmorrhage, etc., and that following a severe illness or septic infection. The author has never found any dangers in the use of serum, such as fever, eruptions, and albuminuria, and believes that improvement follows more quickly by its use than by that of iron and arsenic. When administered subcutaneously two or three injections of 10 c.c. of serum, at intervals of two or three weeks, usually suffice to bring the blood-count up to the normal. If given by the mouth, 10 c.c. are administered daily for four consecutive days, the treatment being repeated at intervals of three weeks until a similar result is obtained.

AT a recent meeting of the Medical Society of Vienna Dr. M. G. Schwartz reported on a means of preventing the harmful action of the X-rays on the tissues. He finds that the tissues are more sensitive to the x-rays when they are in a state of active metabolism. Seeds are not affected by the x-rays except when they are in a state of active vegetation. In the case of the skin, compression not only diminishes the circulation, but also inhibits metabolic changes. If an area of skin rendered ischæmic by compression is submitted to the

action of the x -rays, there is produced only a transient hyperæmia, whereas in the adjacent area, not compressed, inflammation results. Further, the x -rays cause the hair to fall out, but if the skin is compressed the hair is unaffected. If, therefore, the skin is compressed much larger doses of the x -rays can be applied without fear of cutaneous complications. In support of these observations Dr. Nobl remarked that similarly the action of liquid carbolic acid is much more feeble on the skin, if it is compressed, than on the skin under ordinary conditions. The utility of these observations is quite obvious. By compressing the skin one should be able to apply the rays of greater strength, and, therefore, of more penetrating power in conditions in which it is desired to affect the deeper tissues, and also in cases of ringworm, for instance, one may be able to limit the field of action of the rays simply by compressing the surrounding skin.

MANY and various have been the treatments advocated for that troublesome condition of Furuncles, the most modern being the compression-cups of Bier. The following is the method advocated by Dr. G. Th. Jackson, Professor of Dermatology of the College of Physicians and Surgeons of New York. As soon as the furuncle begins to point, he pierces the summit with a pointed stick of wood dipped in 95 per cent. of carbolic acid. He does not use any pressure in the usual way to extrude the pus, but washes the surface around with hydrogen peroxide or with a 1-per-cent sublimate solution, and then applies gauze smeared with an ointment containing 5 to 10 per cent. salicylic acid. This is usually sufficient to effect a cure, but occasionally, if the furuncle is very large, the operation must be repeated the following day. The ointment must be kept applied for about a week. If fresh furuncles appear in the surrounding skin, due to infection before the application of the treatment, these must be treated in the same manner. If the furuncle fails to point, one or two drops of a 5 to 10 per cent. solution of carbolic acid should be injected and the ointment applied as already described. The author states that he has used this method for many years with complete success, and was taught this manner of treatment by Dr. G. H. Fox, previous Professor of Dermatology of the same college.

IN an interesting contribution to *La Semaine Médicale*, Dr. L. Cheinisse, of Paris, discusses the occurrence of Hæmorrhages in the Course of Influenza, and especially of Post-Influenzal Hæmorrhages. Although in recent years the occurrence of hæmorrhage in the course of the disease—epistaxis, hæmoptysis, and the like—has been recorded by various authors as pathological phenomena of an exceptional nature, the author shows that as far back as 1872 the description of the disease given in Jacoud's "*Dictionnaire de Médecine et de Chirurgie Pratiques*" includes these phenomena. But to go still further back, Etienne Pasquier in 1643 describes an epidemic disease analogous in all respects to influenza, in which he says there was a tendency to great effusions of blood by the mouth, the nose, and the rectum. Perhaps the most usual and best recog-

nised form of hæmorrhage is the epistaxis, which often precedes or accompanies the onset of the disease. Morin distinguishes from this a form of hæmorrhagic influenza analogous to hæmorrhagic variola or hæmorrhagic measles, and again what he calls "critical hæmorrhage," when a pseudo-meningitic influenza suddenly clears up on the occurrence of a profuse epistaxis. Dr. Cheinisse's particular observations, however, refer to the occurrence of hæmorrhages some time after an attack of the disease, and he records three cases in which more or less severe and obstinate epistaxis occurred some three or four weeks after the commencement of convalescence and without any apparent cause apart from the disease. He refers also to the report by Dr. Grainer of four cases of cerebral hæmorrhage following some time after attacks of influenza without any known constitutional predisposition. From these facts and observations the author seems justified in his conclusion that the disease carries with it a tendency to hæmorrhagic manifestations, and he suggests that they may be caused by a functional disturbance of the vaso-motor nerves leading to an excessive dilatation of the blood-vessels and consequent congestion.

BEURMANN, the discoverer of the *Sporotrichium Beurmannii*, contributes to the current number of the *Revue de Chirurgie* an interesting summary of the pathological lesions due to the fungus. Clinically the sporotrichium is important, because the lesions it causes are liable to be mistaken for tubercular deposits, gummata, or actinomycotic foci. Beurmann describes several cases in which bony and periosteal lesions were present, and in which a diagnosis of new growth or of an infective granuloma might reasonably have been made. In England the disease appears to be very rare, though cases of sporotrichosis affecting the skin have been recorded. In practice the differential diagnosis is very important, since lesions due to the fungus—which can always be fairly easily demonstrated microscopically—are singularly benign when properly treated. The prognosis in periosteal and old indurative cases is less good, but even here complete cures have been recorded in cases where the disease has existed for many months. Beurmann recommends fairly large doses of potassium iodide, giving as much as 90 grains of the salt per day. He also speaks highly of painting the surface of the lesion, especially where the skin is broken, with a lotion containing potassium iodide and tincture of iodine. This local treatment, combined with regular doses of the iodine internally, is usually effective in combating the disease.

THE marked infrequency of Tuberculous Peritonitis in association with Pregnancy, as compared with the quite common coincidence of other tuberculous lesions with the latter condition, is the subject of a paper by Dr. J. Pery, abstracted in the *Medical Review*. The explanation offered, probably with correctness, is that the adhesions and other changes produced cause sterility. It might also be suggested that the considerable number of

cases in which the mischief starts as a tuberculous salpingitis may have something to do with the matter. In the case reported by this author, the diagnosis proved to be so extremely difficult that it was not until after tapping the abdomen that it was finally solved. The patient was in the fifth month of her fourth pregnancy when admitted to hospital suffering from abdominal pain of a fortnight's duration with vomiting, orthopnea, and much distension of the belly. There was slight cough and profuse nocturnal sweats, but no hæmoptysis. Respirations were 50 per minute, and the pulse was small, irregular, and very rapid. In the epigastrium was a mass which gave the impression of an extremely distended uterine fundus. Percussion gave a line of dulness concave downwards, with a little resonance in the left flank undisturbed by change of posture. The diagnosis was considered doubtful between hydramnios and ascites, probably the former; but the result of tapping was to draw off more than five pints of blood-stained tuberculous fluid, after which the uterus could be made out distinct from other nodular masses. After a second tapping the patient aborted; she eventually left hospital with signs of double pleural effusion, as well as of tuberculous peritonitis, and has been lost sight of.

THE prophylactic removal of the Appendix in every case of abdominal section in which there is no pressing necessity to conclude the operation at once finds an enthusiastic advocate in Dr. Laphorn Smith, of Montreal. This surgeon has come round to the opinion that a laparotomy should be begun by inspection of the appendix, which should be removed if it cannot readily be brought up into the incision, or if, when brought up, it is found to be kinked by bands or adhesions. He would, in fact, like to lay down the removal of the viscus in all laparotomies, but is content for the present with the less sweeping procedure. He narrates cases in which intestinal obstruction and peritonitis, after various laparotomies, have been traced to appendicitis; and he also has a strong impression that many lesions diagnosed as puerperal fever really originate in a chronically inflamed appendix. In the discussion of this paper, which was read before the American Gynæcological Society, several operators expressed themselves as very averse to the removal of a healthy appendix when the abdomen is opened for some other operation. Dr. Peterson at one time removed two hundred consecutive appendices as a prophylactic measure, and found 50 per cent. of them to be microscopically diseased. Since then he has not removed the appendix unless it is macroscopically abnormal, and has had no reason to regret his withdrawal from the rather more advanced views he formerly held. The question is one which has more than one side to it; but probably few British surgeons practise what Dr. Laphorn Smith preaches.

THE Annual Report of Queen Charlotte's Lying-in Hospital contains, as usual, many interesting facts and figures from the year's record of cases. Antepartum Hæmorrhage was treated twenty-seven

times out of one thousand eight hundred and sixty-five deliveries. Of thirteen cases of placenta prævia four were central, two marginal, and seven lateral: five of the patients went to term. Of the mothers two died, one of them from septicæmia; but of the children a much higher mortality was recorded, for but three survived. As for treatment, Champetier de Ribe's bag was used five times, version done thrice, forceps used four times, and plugging of cervix and vagina resorted to once. The other fourteen cases of hæmorrhage were all idiopathic: that is, no injury or fall had been sustained to account for the onset of the accidental hæmorrhage. Five cases were of severe type, but no maternal deaths were recorded: ten of the children died. From analysis of the urine of every patient admitted to the hospital it would appear that 17.5 per cent. of primiparæ show albuminuria at the time of delivery, and that 6.9 per cent. of multiparæ do so. An additional 6.9 per cent. of primiparæ and 5.7 per cent. of multiparæ present this symptom not only at delivery but until at least the fifth day of the puerperium also. Finally, percentages of 0.9 and 0.5 respectively are markedly albuminuric, with symptoms either of nephritis or eclampsia, or both. Another interesting table is that showing the details of all the cases of contracted pelvis treated in the hospital during the year. In view of the condemnation abroad by several leading obstetricians of the induction of premature labour as a means of treating these patients, it is satisfactory to see what excellent results the method yields in the hands of the Queen Charlotte's staff.

MR. C. B. LOCKWOOD contributes to the *Clinical Journal* some interesting remarks on Short Circuits in the Lymphatic Dissemination of Cancer in various situations. In dealing with carcinoma of the tongue, very early glandular deposit is especially to be looked for in a small lymph node which is embedded in the submaxillary salivary gland, especially when the disease is in the middle third of the tongue. He describes also another short circuit from this situation, along lymph vessels which cross the ala of the thyroid cartilage, loop upwards and outwards in the region of the cricoid to end in a gland just above the omo-hyoid muscle. In connection with the breast there is a short cut to the main deep lymph vessels by a trunk which does not traverse the lower axillary glands, but passes at first upwards and then through the pectoralis, or between that muscle and the deltoid, and empties into the lymphatics beneath the costo-coracoid membrane close to the subclavious muscle. When dealing with cancer of the external organs of generation, the crossed lymph channels must be borne in mind and the superficial and deep inguinal glands dealt with on both sides of the body, no matter how unilateral the lesion. But Mr. Lockwood believes that this is not enough, and that the internal and external retro-crural glands must also be extirpated, for deep inguinal lymphatics enter the femoral sheath and others pass up the spermatic cord or round ligament through the inguinal canal. These glands are dealt with through an incision similar to that for ligature of the external iliac artery.

HOSPITAL CLINICS.

A SERIES OF TEN CASES OF COMPLETE RUPTURE OF THE UTERUS.

By LIONEL SMITH, M.B., M.R.C.P.

(A paper read before the Obstetrical and Gynæcological Section of the Royal Society of Medicine.)

RUPTURE of the uterus is an accident which is, fortunately, rare, and I think the following cases are worth bringing to your notice, especially as one resulted in recovery, and I was able to examine the woman during her subsequent pregnancy, and treat her in her confinement. Of the following cases, eight were treated in the General Lying-in Hospital, and are the total number of examples of this accident which have occurred in this hospital in the last twenty years. One was in the hospital district, and one I saw elsewhere.

CASE I.—A married woman æt. 34; admitted July, 1906. Onset of labour at term. The woman was seen by one of the district midwives in the early hours of the morning. The pains were strong and regular. The vertex presented in the first position. Labour appeared to be normal, in all respects. She was seen again four hours later, and was having strong pains and looked exhausted. Pulse 100. The os was fully dilated; marked œdema of the vulva; no loss of blood *per vaginam*. Half an hour later the patient collapsed and was brought to the hospital in a cab. On admission she was extremely collapsed; her pulse was 136, respiration 26, temperature 100.2°. The uterus was firmly contracted and very tender. The foetal head was felt above the brim and to the left. An attempt at forceps delivery failed, and the head was perforated and delivered by means of the cephalotribe. The placenta was expressed. There was found to be a large rent, which admitted the hand, and the pelvis was crammed with blood clot. The rent was neither irrigated nor drained. The patient's general condition was very grave, the pulse being hardly perceptible at the wrist. There was great pain in the lower part of the abdomen, for which $\frac{1}{4}$ grain of morphia was injected hypodermically. Her condition was extremely critical, and then slowly improved. The bowels were opened on the third day with castor oil. From the third and tenth day the lochia was offensive. The temperature varied between 98.8° and 101°. The vagina was irrigated twice a day with a weak solution of lysol. After the tenth day her convalescence was uneventful. The patient was not seen again until November, 1908, that is, seventeen months after the confinement, and was then seven months pregnant. During the next two months she was examined from time to time, but as the pregnancy appeared to be normal there seemed no reason for interference. On February 3 she was admitted to the hospital in labour; she had neglected to come until labour was very advanced. I was unable to make a very satisfactory examination of the abdomen as the pains were very frequent and violent; but midway between the pubes and the umbilicus there was a definite ridge, which, I think, was a commencing retraction ring. The os was fully dilated, and the vertex was presenting in

the second position. The foetus was fixed in the pelvic brim, but did not advance with the pains. There was considerable hæmorrhage from the vagina. I thought it would be unwise to delay, so I gave chloroform and delivered with forceps. The total duration of the labour was four hours; after delivery I thought it well to explore the uterus, to remove the placenta, and see if there was any cause for the hæmorrhage which preceded delivery. The placenta was attached to the lower zone of the uterus, on the left side, and partially covered the cicatrix resulting from the rupture. It was very adherent, and had to be removed in pieces. There is no doubt it had been torn during labour. On the left side was a groove, at the bottom of which the uterine tissue felt hard and cartilaginous; and at the opposite side there was a ridge of hard tissue three inches long, lying in the long axis of the uterus. There is no doubt it was the cicatrix of an incomplete rupture, which occurred at her previous confinement, which had been overlooked. The puerperium was uneventful, and the patient was discharged on the fifteenth day.

CASE II.—A small, single woman, æt. 26. Labour commenced on April 22nd, when the membranes ruptured. On the 3rd there was loss of blood; on the 4th the pains were very strong. On the 5th, at the midwife's suggestion, a doctor was sent for, and on the same day he called in a colleague in consultation. On the 7th a third doctor was consulted, when chloroform was given, but she could not be delivered, and was therefore sent to the hospital. On admission she was found to be very ill, with a pulse of 132, temperature 99°, respiration 32, vomiting frequent, and occasionally she had attacks of hiccough. The abdomen was much distended and very tender. The uterus was firmly contracted, and there was a marked retraction ring at the level of the umbilicus. The perineum was lacerated, and there was great œdema of the vulva, and the discharge was very offensive. The remains of the foetal head could be felt at the pelvic brim, with the occiput posteriorly. A small quantity of blood-stained urine was drawn off by means of the catheter. I delivered with the cephalotribe without difficulty. Immediately after delivery the placenta was expelled into the vagina and removed. The vagina was irrigated with saline and clots removed. The cervix was exposed with the speculum, and a large rent could be seen, through which coils of intestine were visible. It was irrigated and all clots removed, and it was lightly packed with gauze. She was practically moribund. She was infused with several pints of saline. She rallied slightly, but died several hours afterwards. After delivery the uterus remained firmly contracted. The infant was decomposing, and its remains weighed 4 lbs. *Post-mortem*.—The

uterus was removed, and the rupture was found to commence in the mid-line of the posterior lip of the cervix, extending vertically upwards as far as the retraction ring. At this point it turned to the right. It seemed probable that if labour had not been terminated this would have completely encircled the uterus, separating the lower from the upper segment.

CASE III.—The patient was a healthy married woman, *æt.* 37. Previous labours had been normal. The woman was sent to the hospital by a doctor in the country, who had made prolonged and repeated attempts to deliver with forceps. Labour commenced at term. When admitted, the head was lying in the pelvis, in the transverse diameter of the brim. The pains were frequent and very strong, pulse 120. The house physician attempted to deliver with forceps, but he did not recognise the extreme gravity of the case, and there was some delay in summoning the visiting physician. On his arrival the patient was in a collapsed condition, the uterus was firmly contracted, the fundus being on a level with the umbilicus. The foetal parts were immediately beneath the abdominal wall. The abdomen was opened, the infant and the placenta were extracted, and as much blood as possible removed, the rent in the uterus was sutured, and a drain passed into the vagina. After the operation there was some slight improvement at first, but the patient died $2\frac{1}{2}$ hours later.

CASE IV.—The patient was a married woman, a primigravida, *æt.* 33. She had been attended by two practitioners, who first dilated the os, and then tried to perform version, but after repeated and prolonged trial failed to do so. On admission the uterus was in a state of tonic contraction, and a well-marked retraction ring could be seen and felt below the level of the umbilicus. The lie was transverse, the head being in the right iliac fossa. The right arm was presenting. The liquor amnii had drained away. The cervix was lacerated in all directions; the head was decapitated and afterwards extracted with the cephalotribe. The lacerated vagina and the perinæum were repaired as well as possible. The total duration of labour was 14 hours. The patient died 20 hours after delivery. There was a small tear in the lower segment of the uterus, which had extended upwards from the lacerated cervix.

CASE V.—The patient was a married woman, *æt.* 31. She presented marked evidences of rickets. She was only 4 ft. 9 in. high. Her first confinement was described as having been a terrible time, and she was advised to have labour prematurely induced when she again became pregnant. Her second delivery was natural. She was attended by a midwife, and no particulars are available. Before admission the doctor had used forceps, and tried to do version. Her pulse was 140; the lie was transverse; one arm, both feet, and the cord were presenting. The duration of labour was $26\frac{1}{2}$ hours. Under chloroform the after-coming head was delivered by the cephalotribe. The placenta had passed into the peritoneal cavity through a rent in the uterus. The patient was treated by stimulation and saline infusion, but she never rallied, and

died six hours after delivery. A large tear was found in the vault of the vagina, involving the lower segment of the uterus posteriorly.

CASE VI.—The patient was a married woman, *æt.* 25. Admitted to the hospital after having been in labour 50 hours, and after delivery had been many times attempted by forceps. The os was fully dilated. A hydrocephalic head was presenting above the pelvic brim. The head was perforated and delivered with the cephalotribe. After delivery, the uterus was well contracted, but the patient was very collapsed. She was treated by stimulation and infused with saline, but died twelve hours after delivery. At the necropsy a tear in the vaginal vault and lower uterine segment was discovered, and the uterine cavity contained a quantity of blood.

CASE VII.—The patient, a married woman, *æt.* 37, was sent to the General Lying-in Hospital, and died almost immediately on arrival. She had been attended by a midwife. She lost $1\frac{1}{2}$ pint of blood, and labour had lasted 18 hours. After three hours the pain recommenced, and she found a second child presenting by the shoulder. A doctor was sent for, who for several hours tried to bring down first the head and then a leg; but as he could not do so, he sent her to the hospital.

CASE VIII.—The patient was a married woman, *æt.* 40. Her face was puffy, and her general aspect gave one the suggestion of Bright's disease. Her urine contained albumen. Her last confinement was two years before. There was no history of her previous pregnancies or labours. She was admitted to the hospital with the membranes intact. The os was the size of a two-shilling piece. The vertex was presenting in the first position. The pains were slight and irregular. The labour commenced at some time on the 10th. The pains were irregular and very feeble, and she slept most of the time until 6 a.m. on the 11th. Then she had three very strong pains, causing her to shriek. It was found that she had lost some ounces of blood. The os was still the size of a florin; the membranes were intact. The vertex was still above the brim. The membranes now ruptured spontaneously, and the pains became more frequent and stronger. At 11.30 A.M.—five hours after she had the first strong pains when the hæmorrhage occurred—she looked very ill and pallid, and had a pulse of 120. The uterus was hard and tender. The os was fully dilated, so she was delivered with forceps at once. After the birth of the head there was only very slight contraction of the uterus, so the body was delivered by traction. Only four ounces of blood was lost. The child was still-born. The placenta could not be expressed. It was found protruding from the os, and when grasped by the hand, slipped away into the peritoneal cavity. Her pulse was 144, and she died within ten minutes of delivery. The first stage of labour lasted 35 hours, but it was not continuous; the second stage was one hour, and the third stage 15 minutes. The child, a male, weighed 9 lbs. 12 oz. There was a rupture through the posterior wall of the uterus, but the exact position is not stated in the notes.

CASE IX.—This patient was a healthy married

woman, æt. 39. Her previous nine pregnancies and labours had been normal, and all her children had been born alive, including one set of twins. One of the hospital midwives saw the patient at 11 P.M., and found the breech presenting. The pains were strong and regular, occurring every three or four minutes. During the next hour the body was delivered without difficulty, but as the arms became extended the midwife could not deliver the head. She sent for the nearest doctor, not because she was unable to deliver, but because the patient had become collapsed. The doctor arrived in a few minutes, but on his arrival he found the patient *in extremis*. He brought down an arm without difficulty and delivered the head. He removed the placenta from the vagina, and almost immediately the patient died. The post-mortem showed the body to be that of a well-developed and well-nourished woman. The skin was pale and waxy, and all the tissues bloodless. The peritoneal cavity was filled with blood. After removal of the blood, a large rent in the left side of the lower segment of the uterus was found, extending upwards through the left broad ligament. The pelvic organs were removed, and the uterus opened in the midline through the anterior wall. The lower segment was very thin. There was a huge rent, admitting the closed fist, extending from the left side of the external os below, to the retracted upper portion above, and passing outwards through a considerable portion of the left broad ligament. The torn end of the uterine artery, or of one of its branches, could be seen. The upper segment of the uterus was in places $1\frac{1}{2}$ in. in thickness. On the right side, above the retraction ring, was a complete rupture, which admitted the index finger. Around the circumference of the lower margin of the upper segment were a dozen vertical fissures, extending deeply into the muscular substance, all of which had the appearance of having been cleanly cut with a knife. All the organs of the body were healthy. The amount of blood in the peritoneal cavity was enormous—four or five pints at the least.

CASE X.—A married woman, who had been in labour a week. The child was presenting by breech. Delivery obstructed by cancer of the cervix. The after-coming head was perforated. She died twelve hours after delivery. The uterus was ruptured, the rent beginning in the carcinomatous cervix and extending forwards.

Authorities vary much in estimating the frequency of the occurrence of rupture of the uterus. Winckle says it arose once in 1,666 labours; other observers think it less frequent—about once in 6,000. This great divergence of opinion can only be due to different methods of calculation. In the last 20 years 10,989 women have been delivered in the General Lying-in Hospital, and there were eight cases of rupture of the uterus, or one in 1,373 deliveries. But such a calculation is no correct guide to the frequency of rupture of the uterus, for in six cases the rupture had occurred before admission, and in only two did rupture occur after the patient was admitted. A calculation on this basis would give one in 5,494 deliveries, which is pro-

bably much more correct than the other figure. Rupture of the uterus is said to occur more frequently among multiparæ than among primigravida. In this series 80 per cent. were multiparæ, 20 per cent. were primigravida. From an examination of these cases it appears that there are two distinct classes of case in which the uterus is liable to rupture. In the first class, and that to which I particularly wish to draw attention, the uterine action is at fault, and this abnormality is not necessarily associated with any obstruction to delivery, although in one case of this series there was slight contraction of the pelvis. The abnormal uterine action I refer to consists of increased excitability of the uterus, resulting in a great increase in the frequency and strength of the contractions, and premature retraction, a condition similar to that caused by the administration of ergot during labour. Case No. 1 is a typical example of this class. The total duration of labour was only four hours, and in this short time, the lower uterine segment being so thin, that rupture occurred. Retraction was so marked that I think rupture would have again occurred if I had not terminated labour artificially. I think cases exhibiting this exaggerated excitability of the uterus are rare, but I have seen a few examples in which labour would have ended disastrously if instrumental aid had not been resorted to.

In the second class, in which are included the majority of the cases I have recorded, rupture of the uterus followed a prolonged and obstructed labour. In some it was possibly the result of perforation with instruments, or due to manipulation. In many of the cases there were definite and obvious evidences, such as deformity or dwarfing, easily recognisable during pregnancy, which should have warned the medical attendant that parturition would have been attended with difficulty and danger. In most of the cases the duration of the labour was much prolonged, and all the usual signs of obstruction, and tonic rigidity of the uterus were present, the uterine rupture being the obvious termination to the labour unless delivery could be effected artificially. An analysis of the symptoms presented shows that in only two did rupture occur without there being most if not all of the usual signs of obstructed labour present. The one symptom presented by every patient, generally in a marked degree, was collapse. In three of the cases the onset of the collapse was sudden; in the remaining seven it was gradual. I think the gradual onset of collapse in the latter cases can be explained partly by the fact that at the moment of rupture the patient was under the influence of an anæsthetic, whereas in the former cases no anæsthetic had been given. The occurrence of pain at the moment when the uterus ruptures depends on whether the patient is anæsthetised. In only one case was the patient conscious of a sudden violent pain and a sensation as of something having given way at the moment of rupture. After the uterus had ruptured, pain and tenderness over the lower abdomen were marked in every case. Subcutaneous emphysema has occasionally been noticed with rupture of the uterus. Considering the prolonged manipulations which preceded and followed rupture in some of these cases, it is astonishing

that this symptom was not observed once. It has been stated that after rupture of the uterus, rhythmical contractions cease. I think this largely depends on whether the foetus has escaped from the uterine cavity. If it has escaped, the uterus contracts down; but if it has not escaped, and the rupture has not been so extensive as to separate the lower segment from the upper, there is no reason why the uterine contractions should not continue.

In all the cases there was a certain amount of blood lost *per vaginam*. The amount of blood found in the peritoneal cavity varied from about a pint to almost all the blood the body contained. Did the blood escape at the time of the rupture, or in a few minutes afterwards? Or was there a steady loss until the patient's death? In three of the cases there is no doubt there was a continual oozing until the patient died. In eight cases the rupture occurred in the lower uterine segment; in two cases the upper segment also was involved. In one case not only the retracted portion of the uterus ruptured, as a direct result of the extension of the tear in the lower segment, but there were several incomplete fissures in the upper segment. One specimen shown to-night indicates a complete rupture of the lower segment, and on the opposite side an incomplete rupture, the peritoneum alone being involved. In nine of the cases it was the posterior wall which gave way, rupture occurring nine times on the right side, four times on the left, once in the mid-line; while in three cases the notes do not state the position of the rent. In only one case was the rupture through the

anterior wall. On examining such a series of cases as this, having a mortality of 90 per cent., one asks oneself whether other methods of treatment might have given better results. One can at once eliminate those cases in which death occurred so rapidly that no time was allowed for anything to be done. Of the seven cases which remain, in No. 1 the patient's general condition alone was treated. Nothing was done locally, yet the woman recovered, and has had a full-term child since. Still, the woman's condition, for several hours after delivery, was so serious that any operation would have ended fatally.

In case 3, in which the foetus escaped into the peritoneal cavity, there is no doubt the proper treatment was to open the abdomen and remove the foetus, and then cleanse the peritoneum; and I think that in this case the correct treatment for the rent in the uterus was adopted as being the shortest proceeding, and that was to rapidly suture the wound. In dealing with a patient not so profoundly collapsed more perfect means might have been adopted, but the patient died, and any more serious operative measures would only have hastened the end. In case No. 2 the patient was too collapsed to have borne any other treatment. I had a very good view of the edges of the rent, and I was certain all hæmorrhage had ceased, and therefore I packed the tear lightly. The patient with cancer of the cervix, case 10, was obviously dying, and when the foetus was dragged through the cancerous tissue it ruptured it. There was not one of the patients who could have borne operative treatment.

ACETONE APPLICATIONS IN THE RELIEF OF ULCERATING CANCER.

ACETONE is a very hygroscopic liquid, so that it has been used in histological work for the hardening and preparation of tissues for microscopical purposes. The fact that acetone causes tissues to shrink and harden has suggested to Gellhorn, Maier, and others that it might be used in the relief of ulcerating cancers. This idea has been confirmed by actual experience. It is not claimed that the acetone constitutes in any way a cure for cancer, but it affords a comparatively simple way of relieving the foetus, hæmorrhage, and discharge from an ulcerating growth. Dealing with inoperable uterine cancers, for instance, Maier finds that, whereas patients who are left alone suffer from loss of strength owing to the recurrent hæmorrhage, the foulness of the vaginal discharge, and the foetus of the atmosphere in which they are compelled to live, the use of acetone almost immediately stops both bleeding and discharge, and thereby leads to cessation of the foetus also. Health improves in consequence of this, appetite returns, and the patient, though incurable perhaps, is greatly relieved. The only symptom that may not be benefited is the local pain, if there be any; this is generally neither increased nor diminished.

The procedure in the case of inoperable cancer of the cervix is so simple that it can be carried out in the patient's own home or in the consulting-room.

With or without a preliminary curettage, a Ferguson's speculum is introduced into the vagina, the position of the patient being such that the speculum points upwards so that fluid poured into it does not at once flow out again. The full Trendelenburg posture may not be necessary, but the patient should be upon her back with her shoulders down and her pelvis raised. The application causes no pain, therefore no anæsthetic is needed. The speculum is held down around the cervix, so that no fluid poured into it can escape into the vagina outside the speculum. Even should any do so there is no great risk, for no pain results, and all that happens is that the surface of the mucosa where the acetone has touched it becomes temporarily whitened. From four to eight drachms of acetone are poured into the speculum and left there in contact with the growth for from a quarter to half an hour. The fluid is then swabbed out, the speculum is removed, the interior of the vagina is also swabbed as a precautionary measure, and nothing more is done for a week. Though the first application will have checked the foetus, hæmorrhage, and discharge, the application naturally needs to be repeated; and as a rule the best plan is to perform precisely the same action once a week, twice in ten days, or even twice a week regularly. The relief amply repays the trouble taken.

MEDICINE.

ASCITES—IV.

DIFFERENTIAL DIAGNOSIS (*continued*).

4. *Distension Associated with Obesity*.—The abdomen may be uniformly and enormously distended as a part of general obesity, the mesentery, omentum, and abdominal wall being inches thick with fat. Here, satisfactory physical examination is very difficult. It may be impossible to determine with any degree of certainty the presence of a small or even a moderate amount of fluid in the peritoneal cavity. The abdomen is usually a little flattened in front, with a considerable amount of bulging in the flanks as the patient lies upon his back. The thickness of the abdominal wall may be felt. Deeper palpation is however very difficult, and tumours and enlarged organs may not be detected. A thrill is difficult to obtain even when much ascitic fluid is present.

5. *An Enormously Distended Bladder*.—This may reach to between the umbilicus and the ensiform cartilage causing general abdominal distension. But there is no bulging of the flanks. Careful palpation may reveal a rounded, tense, cyst-like tumour rising from the pelvis. It is in contact with the abdominal wall, and so yields a dull note on percussion in front, with a convex upper border to the dullness, and resonance in the flanks. In a woman ovarian cyst or pregnancy are more likely to suggest themselves as alternatives to distended bladder than is ascites. The condition is most commonly due to enlargement of the prostate in man, in which case the age helps the diagnosis greatly; in woman probably its commonest cause is retroversion of the gravid uterus.

If there is any question of such a condition being present a catheter should be passed and the urine drawn off, preferably by the medical attendant himself, since in cases of the kind the importance of avoiding every possible source of error is great.

6. *Phantom Tumour*.—In hysterical women, especially about the time of the menopause, the abdomen may become distended and simulate ascites, pregnancy, or ovarian cyst. The abdomen may be uniformly big, and sometimes enormous. The flanks are not bulged, the central part of the abdomen being most prominent, often with a transverse depression just below the ribs and above the pubes. The lumbar region of the spine may be found unduly arched forward.

On palpation what appears to be a smooth round regular tumour, which may even seem to be moveable, may be felt. There is neither thrill nor fluctuation, however. The abdominal wall may be tense from firm contraction of the recti. On percussion a resonant note is obtained all over the abdomen, but in some instances the degree of resonance appears to be impaired. A vaginal examination does not reveal any of the signs of ascites, pregnancy, or ovarian tumour. Under the influence of an anæsthetic the abdominal wall becomes flaccid, the swelling disappears, and nothing

abnormal can be found on then making a careful examination of the abdomen. The importance of an examination under an anæsthetic cannot be over-estimated, and in any doubtful cases it should be resorted to before laparotomy.

7. *Hydronephrosis*.—An enormous hydronephrosis has been known to cause great abdominal distension, and to be mistaken for ascites or ovarian cyst. In hydronephrosis close inspection may show the abdomen one side to be more prominent than the other, whereas in ascites the abdominal distension is usually general, both sides being equally enlarged. A local collection of fluid in the peritoneal cavity shut off by adhesions as a result of chronic peritonitis is more likely to be confused with hydronephrosis than free fluid in the peritoneal cavity is.

The hydronephrosis must be very large indeed if the tumour extends across the median line of the abdomen.

In hydronephrosis the opposite side may be resonant to percussion and the front of the abdomen dull, whereas in ascites both loins are usually dull and the front of the abdomen resonant. In the case of hydronephrosis the patient may have noticed that the swelling of the abdomen began in one loin and gradually increased in size. There may have been a history of renal colic and of hæmaturia. The size of the tumour may be found to vary from time to time, a diminution in size being associated with a considerably increased flow of urine. In some cases the colon may be felt or seen to lie over the front of the hydronephrosis, or percussion may discover the corresponding band of resonance running down the front of an otherwise dull tumour.

8. *Pancreatic Cyst*.—A large pancreatic cyst, or more properly speaking a cyst of the lesser omental sac with the pancreas incorporated in its wall, may cause general abdominal distension. A careful inspection of the abdomen will show that the most prominent part is between the umbilicus and the ensiform cartilage, and that the greatest circumference is above the level of the umbilicus.

On account of the deep origin of the cyst and its close proximity to the aorta, a well-marked transmitted pulsation may be seen and felt in the upper part of the abdomen. The stomach is usually lying in front of a small pancreatic cyst, but when the latter attains an enormous size the stomach becomes pushed upwards and the transverse colon downwards. On percussion the flanks are resonant; if the stomach is distended with gas and it is lying in front of the cyst, a resonant note may be obtained on percussion over it. More often, owing to the displacement of stomach and colon by a cyst big enough to cause general abdominal distension, the front of the cyst is dull to percussion, with tympanitic resonance above and below it.

Increase in size of the abdomen may be noticed by the patient to begin above the umbilicus. In

some cases the stools are fatty, and the urine contains sugar.

(9) *Enormous Enlargement of the Liver, or Enormous Enlargement of the Spleen*, may cause general abdominal distension. A careful physical examination should, however, enable one in either case to determine that the enlargement is due to the presence of a solid mass which comes down from under the costal margin above, though it may extend below even so far as the pubes; that there is neither fluctuation nor a thrill; that on percussion there is dulness which extends upwards and is continuous with either the normal hepatic or splenic dulness; and that a well-defined edge may be felt below, extending in the case of the liver from the right below obliquely upwards towards the left, whilst a well-marked notch or notches in it may be almost pathognomonic of the spleen. The only variety of splenic enlargement likely to cause real difficulty when physical examination alone is relied upon is that of splenomedullary leucæmia; here the blood-count will clear up any doubts. The only

remaining difficulty may be when ascites coincides with enlargement of the viscus. In these circumstances the sign of "dipping" often becomes one of the greatest value.

(10) *Enormous Dilatation of the Stomach* may cause marked abdominal distension which at first sight may appear to be general. A careful physical examination, however, may reveal that the distension is chiefly to the left of or below the umbilicus; that the epigastric region is flattened; that the outline of the lesser and greater curvatures of the stomach may be visible in some cases; that a well-marked peristaltic wave may be seen to travel from left to right from time to time, and in some cases this may further be watched returning from right to left; that a tympanitic note is elicited on percussion; that a *bruit d'airain* is obtainable over the viscus with the aid of coin-tap and stethoscope; that a well-marked succussion splash may be obtained, indicating the presence of fluid and gas in a closed sac—a physical sign which is never obtained in ascites.

ACID-FAST BACILLI IN NON-TUBERCULOUS SPUTUM.

An acid-fast bacillus is one which retains the stain in spite of treatment with strong sulphuric acid, as in the well-known Ziehl-Neelsen method of staining tubercle bacilli. The best-known acid-fast bacillus is undoubtedly the tubercle bacillus; but there are other bacteria that retain this stain. The bacillus of leprosy is one of these, and the smegma bacillus is another; a bacillus that is sometimes found in cow's milk or in butter is a third. Indeed, there are so many acid-fast bacilli that a book has been written upon them alone.

The difficulties that may arise in distinguishing between tubercle bacilli and smegma bacilli in the urine are familiar. It is less well known, perhaps, that it is by no means every acid-fast bacillus in sputum that is a tubercle bacillus. It is quite true that the very great majority of sputa containing acid-fast bacilli come from phthisical persons. It is equally true that it is the general rule to assume that the discovery of acid-fast bacilli in sputum is certain proof of phthisis in the individual from whom the sputum came. The possibility of falling into error by too slavishly adhering to this rule, however, should be borne in mind, for there are exceptions, and the significance of these, in connection with life insurance for instance, is very great. There may even be obviously abnormal lung signs in association with acid-fast bacilli in the sputum, and yet the pulmonary lesion need not be tuberculous.

The following case would serve admirably for a discussion of this point. A man aged 55 is recorded by Dr. Basile, in Naples, as having suffered from bronchitis in former years, and he now exhibited clinical signs of granular kidney and glycosuria. His condition improved for some months as the result of careful dieting, but then, to the alarm of all, he developed a much more serious attack of bronchitis than he had had before, with abundant expectoration and some pyrexia. Acid-fast bacilli were found in the sputa, and it seemed clear that the patient had

developed pulmonary tuberculosis. The physical signs supported this diagnosis.

The sputa soon became fetid, and upon analysis they were found to contain lung tissue. The prognosis naturally seemed to be of the gravest, but the lesion localised itself completely, and ultimately cleared up, the patient convalescing gradually and recovering in due course.

It might be urged at once that this was nothing more than one of those cases of surprising recovery from an apparently hopeless degree of pulmonary tuberculosis, and that the acid-fast bacilli were really tubercle bacilli after all. Extensive laboratory investigations were carried out upon the organism, however, and there seems to be no doubt that culturally and biologically the bacilli were some other acid-fast variety. Not only were they decolorised by 2 per cent. lactic acid in alcohol in a few minutes, whereas tubercle bacilli are not similarly decolorised in less than half an hour, but also they grew with far greater ease than do tubercle bacilli as a rule. In broth and on gelatine and on glycerine-agar they gave cultures in four and twenty hours, whilst when they were injected into guinea-pigs they caused no other pathogenic effect than a feeble and local lesion. Tubercle bacilli cannot be cultivated very easily, and the cultures do not grow fast; and ordinary tubercle bacilli are very pathogenic for guinea-pigs, giving rise not merely to a local lesion, but to a general tuberculosis.

BOOKS RECEIVED.

A. C. FIFIELD.

"Wastage of Child Life." By J. Johnson, M.D.

J. AND A. CHURCHILL.

"Southall's Materia Medica." By John Barclay, B.Sc., F.C.S.

THE CAXTON PUBLISHING COMPANY.

"The Edinburgh Stereoscopic Atlas of Obstetrics." Edited by G. F. Barbour Simpson, M.D., F.R.C.P.E., etc.

SURGERY.

THE CAUSATION AND TREATMENT OF SCOLIOSIS.

THERE are many causes of scoliosis, but the variety which is most commonly met with is that which comes on in early adolescence, generally in young girls, and it is also, fortunately, the variety in which efficient treatment, if patiently persisted in, is likely to give the best result. The patient herself is, as often as not, quite unconscious that anything is wrong; it is usually her relations or friends who bring her to seek advice because they have noticed what they describe as "a growing out of the right shoulder."

ETIOLOGICAL FACTORS.

The factors producing this are the same as in all deformities which come on in adolescence. This period is associated with undue growth, and the muscular system does not develop at the same rate as the bony skeleton, and it therefore becomes functionally inefficient. In cases of scoliosis the erector-spinae group is the one affected. But why should this cause "a growing out of the right shoulder"? The reason is this: The vertebral column is not absolutely straight even in a perfectly normal individual. There is a slight curve of the dorsal spine, with its convexity towards the right. Two explanations have been put forward to account for this: (1) that the object of the curve is to allow room for the heart and aorta in the left side of the thorax, and (2) that in right-handed people (and these form so large a majority that they must be regarded as normal individuals) the greater use of the right arm strengthens the muscles which attach it to the trunk, so that they gradually pull the vertebral column out of the straight. The first explanation seems the more feasible of the two.

As soon as the muscles become insufficient to support the vertebral column, the normal curve to the right becomes more and more marked. Two secondary curves, both of which are convex to the left, occur later, one in the cervical and the other in the lumbar region. These are the result of the patient's desire to carry the head and body erect.

But these are not the only anatomical changes found. The vertebrae revolve on their vertical axis, so that the spine in each case turns towards the concavity of the curve. In the thorax the vertebrae as they turn carry the ribs and sternum round with them, so that the sternum is displaced to the right, but it tends to return to the middle line. This is achieved by a change in the shape of the entire thorax, and two prominent acute angles are formed, one on the left side in the anterior axillary line, and the other on the right side in the posterior axillary line. The anterior prominence so caused may be most misleading. If it is more marked on one rib than in the rest, it may be mistaken for an exostosis; or if, as often happens, the second and third ribs are most affected, the outer half of the breast may appear to be unusually protuberant, and this organ may be thought to be at fault.

In examining a case of scoliosis, the first thing to do is to mark out carefully with a flesh pencil the position of all the vertebral spines. The degree of curvature thus shown is less than the real one present because, as has been already mentioned, the vertebrae rotate so that their spines lie towards the concavities. The patient should then be made to hang by her hands from a horizontal bar, and a second marking of the spines taken in this position. It is, of course, more accurate to take two skiagraphs, one in the supine and the other in the hanging position, but this is not always practicable.

Cases of scoliosis may be divided into two classes according to the results of this examination: (a) those in which the curvature is obliterated in the hanging position, and (b) those in which little or no change is seen. In the first a good prognosis may be given as to the ultimate result provided that treatment is patiently persisted in, but in the second it is to be presumed that the ligaments on the concave aspects of the curves have been secondarily shortened, and in this case treatment will not effect a cure. At the best it will only arrest the progress of the disease.

METHODS OF TREATMENT.

The treatment consists of exercises which can be carried out at home by the patient. The most useful are the following: (1) hanging on a horizontal bar and pulling the body up until the chin is level with the hands, (2) stooping down and making the tips of the fingers touch the toes without bending the knees, and (3) alternately raising and lowering the body while resting on the hands and toes. These exercises must be graduated; that is to say, the patient must begin by doing them only a few times, it being most important that *she should never be allowed to fatigue herself*. The number of times that any exercise can be done without getting tired is soon learned by experience. At first she should do the exercises twice a day, and after each occasion she should be kept absolutely at rest, flat on her back, for two hours.

Massage to the back is also extremely beneficial, and if this treatment is given it should be applied for half an hour before each period of rest. It will be found, as time goes on, that the patient can undertake a progressively greater number of exercises without fatigue. The back should be examined from time to time in order that it may be known how much benefit is being derived from the treatment. As soon as the back is straight without hanging the patient up the treatment may be allowed to become a little less rigorous, but the habit of doing a few exercises daily should be kept up until adult life is reached.

A poroplastic jacket usually does more harm than good, since it gives the weakened muscles an artificial support, on which they learn to rely, instead of being encouraged to do their own work efficiently.

DISEASES OF CHILDREN.

CIRCUMCISION AND ITS ABUSES.

It is not sufficiently realised that, however advisable circumcision is on hygienic grounds, the anatomical state of the foreskin is by no means frequently sufficient justification for operating. There is much too great a tendency to regard a long and narrow foreskin as in itself a proof that circumcision is needed. Such a foreskin is the characteristic of male babies at birth; while, on the other hand, the penis of the new-born infant is small in size, and frequently very small.

In the new-born babe the glans and prepuce are adherent by reason of the persistence of the epithelial agglutination of the surfaces. Few babies are born with the adhesions fully separated, but separation takes place in the course of some months, and the perfect adult condition is attained about the eighth year.

True congenital phimosis is a rare condition. Sometimes the orifice is constricted, and occasionally it is absent. Constriction of the orifice may lead to ballooning of the foreskin on micturition, a very evident sign, which quickly attracts the attention of the nurse, for the state of the foreskin in babies seems to be peculiarly interesting to nurses, and the question of circumcision generally arises through their initiative. It is stated that a constricted orifice may lead to dilatation of the urethra, bladder, ureters, and kidneys, giving rise to hydronephrosis and atrophy of the renal tissue. Certainly such results are extremely rare from this cause, but excite undue apprehension in the mind of the family doctor. It is also said to cause the retention, accumulation and decomposition of smegma, eczema and balanitis, preputial calculi, adhesion of the prepuce, narrowing of the meatus, urethritis, cystitis, pyelitis, retention, incontinence, and enuresis.

To the local irritation which accompanies some of these affections are ascribed restlessness, insomnia, irritability, paroxysmal screaming attacks, *savor nocturnus*, dysuria, frequent micturition, severe colic, and even pain in the hip. Painful micturition is much more probably due to highly acid urine. Masturbation has followed on local irritation, but, on the other hand, the habit is by no means rare in the circumcised, and has often been ascribed to the effect of circumcision and the friction of clothes on the sensitive glans. Continued mild inflammatory mischief leads to adhesions and the development of a thickened non-retractile foreskin, with subsequent difficulties in coitus and liability to attacks of balanitis. Straining to pass water is supposed to develop or maintain hernia, prolapsus recti, and even hydrocele.

In the course of a very extensive experience of the ailments of infancy the writer has found remarkably little confirmatory evidence of the occurrence of these conditions. Many of them are almost unknown.

Let it be clearly understood that mere redundancy of foreskin is no indication for circumcision. The

penis develops later, and subsequently the supposed long foreskin may be insufficient to cover the glans completely. If the prepuce can be retracted with moderate ease, it should certainly be left. It is a very valuable protection for the glans. The fact that among the children of the careless and unwashed smegma may accumulate under the prepuce and become offensive, is not an argument in favour of operation, but a slur on the person responsible for the welfare of the child.

Circumcision must not be regarded as a trivial and harmless operation, for many evil and fatal results have ensued. Sepsis, sloughing of the skin and ultimately extensive scarring, sloughing and gangrene of the penis, fatal hæmorrhage, erysipelas, and pyæmia have all occurred. Syphilis and tuberculosis have been transmitted when the operation has been done as a religious rite, and not by a trained surgeon. Hæmorrhage is rare, for the Jews remove skin only, do not cut the mucous membrane, and carefully avoid the frænum, though neither sutures nor ligatures are used. Hæmorrhage is commonly due to neglect to tie the vessels of the frænum.

Apart, however, from serious and fatal sequels, the operation of circumcision may be a source of discredit to the operator and of subsequent trouble to the child. It is by no means rare to find an excessive amount of skin removed. A chronically thickened preputial stump or a mass of redundant skin may give the organ an unkempt and ragged appearance, which spoils the reputation of the surgeon for years and is a constant source of gossip among the female branches of the family, although the inartistic appearance eventually is lost or forgotten.

In many babies it is quite sufficient to separate the adhesions with a probe, without causing bleeding. Others can be treated by dilatation with dressing or artery forceps, until the foreskin can be easily retracted. It is then cleaned, oiled, and replaced. Retraction and oiling should be done daily for a time. This may be left to the mother or nurse if the foreskin can be replaced easily. Otherwise there is the prospect of being hastily summoned to deal with a paraphimosis. If the surfaces bleed on separation, adhesion is almost certain to recur, for the retraction cannot be carried out daily without pain and will be neglected. Failing cure by these simple measures, recourse must be had to complete circumcision; to incision of the mucous membrane only on each side; to longitudinal dorsal incision of the foreskin; or to other modification of the complete operation, depending on the length of the foreskin, the degree of adhesion and stenosis, and the ideas of the parents and operator in reference to the desirability of this operation. Care should be taken not to remove too much skin, leaving enough to cover the corona, and to enlarge a narrow meatus, if present; for this may quite well be the cause of screaming and straining on micturition.

ANÆSTHETICS.

SPINAL ANALGESIA.

THE attitude of the medical profession of this country towards the recently introduced and powerfully advocated methods of obtaining analgesia by the injection of various drugs into the theca spinalis is still one of hesitancy. The leaders of medical thought are still greatly at variance over the advantages and still more over the disadvantages, of spinal injections; and it is not surprising, therefore, that the rank and file should still regard it with a certain degree of suspicion.

Two recent discussions in London on the merits and demerits of the methods used, showed that quite a number of surgeons and anæsthetists, have afforded them a trial. In the experimental stage, which admittedly has not yet been passed, it is of interest to note individual experience and opinion on the various methods of administration, dosage, drug used, posture, and so forth. Mr. Canny Ryall, in opening a discussion on June 4 at the West London Medico-Chirurgical Society, showed at least that possibilities hitherto unthought of are within the range of practical politics, even if it must be added that not all his audience were convinced of the superiority of spinal analgesia over general anæsthesia.

The argument on which his experimental work and its practical applications are based is briefly this:—Difficulties such as faintness, cessation of respiration, and shock, following spinal injection are due to the toxic action of the drug upon the vital centres of the medulla and brain by direct extension in the cerebro-spinal space, not to absorption and subsequent diffusion through the blood stream. This conclusion is based upon experimental work on animals, which has shown that a given dose is more fatal when injected into the spinal theca than when injected into the circulation by venous puncture; it has also been proved that a dose which is fatal when injected into the lumbar spine is not fatal when a ligature has previously been applied round the cord and its membranes at a higher level. Mr. Ryall argues that some means must be found by which the important centres can be protected from this depressing and toxic action. Such a means is afforded, he believes, by the combination of strychnine with the anæsthetic used (novocain in his cases). Now strychnine, when intra-spinaly injected, has a very much more powerful effect upon the cerebral nervous system than when given subcutaneously or intravenously, and therefore it becomes important to know precisely what its effects in a given dosage are. It is found that to administer .001 gramme of strychnine into the cervical cerebro-spinal fluid of an adult man or woman has the effect of rendering the patient's nervous system so excitable that a very slight stimulus to any part will throw it into spasm; and half that dose is accordingly considered sufficient to protect the respiratory centre from any danger of depression from the analgesic dose of novocain. When the injection is made in the lumbar or lower dorsal

region more strychnine is required, and the full milligramme may then appropriately be introduced.

Protected in this way, he does not hesitate to assert, spinal analgesia may be safely and advantageously used for operations in any region from the crown of the head downwards. For operations on the head, neck, tongue, thyroid, and so forth, the site of puncture is between the axis and atlas vertebræ. Here the cerebro-spinal space is large, and the danger of puncturing the cord is said not to exist provided the cardinal rule is observed of pushing in the needle quite slowly, and of never injecting until a free flow of cerebro-spinal fluid appears through it. The dose recommended for an ordinary adult is .02 to .08 gramme of novocain with .0005 gramme of strychnine in 1 c.c. of water; for children under ten half of these quantities are used. The exact dosage depends on the probable duration of the operation, and on the previous exhibition of scopolamine-morphine; the age of the patient makes but little difference. The patient sits up for two minutes after the injection, and is then put supine, with the head low; there is no objection at all to the Trendelenburg position.

For operations on the arms and thorax, the puncture is made between the fourth and fifth cervical vertebræ, and the patient is allowed to sit up for three minutes instead of two before being placed with the head low. For operations on the liver, stomach, gall-bladder and upper abdomen generally, the puncture is made in the eleventh dorsal interspace, and a somewhat larger dose is given—that is, .05 to .15 gramme of novocain with .001 gramme of strychnine. Here, and in the lower cervical region, the thickness of the layer of fluid between the dura mater and the cord is very much less than it is in the upper cervical vertebræ, and corresponding care to introduce the needle very slowly is essential. For the lower limbs, rectum, pelvis, etc., the dose of novocain is from .06 to 0.2 gramme with 1 milligramme of strychnine. This is introduced in the first lumbar space, or lower. It is very important to keep most accurately in the middle line, and to inject into the median space, some 2 to 6 millimetres in width, which separates the bundle of the cauda equina of one side from that of the other; otherwise the injected fluid may become enmeshed in one or other bundle, and a unilateral or unsatisfactory anæsthesia may result.

Mr. Ryall feels very strongly that by this combination of strychnine with novocain a definite gain is obtained, and a very grave objection to spinal analgesia avoided. In the discussion which followed it was evident that those who have had experience of spinal analgesia are unfamiliar with the strychnine combination, and are therefore not in a position either to criticise or to belaud it. Broadly speaking, the surgeons are much more enthusiastic in their advocacy of spinal methods than are the anæsthetists. It is especially notable what a large proportion of the former expressed the opinion that the dangers

of general anæsthesia are very gravely underestimated. It is, perhaps, only natural that surgeons, taken as a whole, should be impressed more than are anæsthetists by the frequency of post anæsthetic trouble, such as headache and vomiting, because to them falls very often the treatment of such symptoms. Indeed, the anæsthetist may never hear of their occurrence. There is an undoubted tendency to speak as if these troubles are the rule instead of the exception, which is certainly the case after the administration of a general anæsthetic by a reasonably practised administrator.

At the present time and in the present state of knowledge it is not unfair to sum up the situation in regard to spinal analgesia thus. The technique requires considerable practice and the most perfect comprehension of asepsis. In practised hands it is nearly always successful in producing complete analgesia and a degree of relaxation which is eminently satisfactory to the operator. It is especially indicated for prostatectomy, an operation demanding relaxation which it is both difficult and dangerous to get by inhalation methods, and one often performed on those for whom on every ground a general an-

æsthetic is highly inadvisable. For those with serious disease of the lungs or kidneys, also, it is strongly indicated; but it is as unquestionably contra-indicated for those who are the subject of any general infection, as suppurative meningitis not uncommonly then follows. Its dangers, immediate and remote, are not yet fully ascertained; but they are distinctly not a negligible quantity. Several deaths have occurred, and other sequelæ, less serious but decidedly unpleasant, are not rare. Thus a considerable proportion of patients suffer from headache, which may last several days, and ocular paralyses are among the most recently reported mischances.* On the whole the method cannot as yet be recommended to general practitioners, for many of those who have tried it are still unconvinced of its superiority to ether and chloroform; but it seems possible that improvements in administration may widen the scope of its usefulness, and that it may still prove a formidable rival to those drugs. As far as matters have gone at present this stage has not yet been reached.

*See report of 12 such cases in the *British Medical Journal*, June 5, 1909.

THERAPEUTICS AND PHARMACY.

SOME MORE INCOMPATIBLE PRESCRIPTIONS.

ACTUAL prescriptions that prove to be unsightly, dangerous, or otherwise unsuitable when dispensed are always of interest to the physician, especially if the causes of their imperfections can be avoided on subsequent occasions. The following are some further examples of incompatible prescriptions collected from the *Pharmaceutical Journal*:—

R. Potassii Chloratis	...	...	gr. xx.
Calci Chloridi	...	...	3j.
Acidi Sulphurosi	...	...	3ij.
Aquam chloroformi	...	ad	3iij.

Misce. Fiat Mistura.

When compounded as written a copious precipitate forms when the mixture has been standing about two hours or so. This is owing to an interaction between the potassium chlorate and the sulphurous acid, as the result of which sulphuric acid is formed. The sulphuric acid in its turn reacts with the calcium chloride, and relatively insoluble calcium sulphate is produced, together with free hydrochloric acid also.

R. Potassii Iodidi	...	...	3ij.
Tincturæ Ferri Perchloridi	...	...	3iij.
Infusum Quassiae	...	ad	3vj.

Misce. Fiat Mistura.

Sig. : A tablespoonful three times a day.

In this case there is the old difficulty of liberation of iodine by interaction between the potassium iodide and the perchloride of iron. Iron and ammonium citrate might be used instead of the latter.

R. Plumbi Acetatis	...	...	gr. xxx.
Acidi Acetici diluti	...	...	5ij.
Syrupi Tolutani	...	...	3iv.
Syrupi Limonis	...	...	3iss.
Aquam Cinnamomi	...	ad	3vj.

Misce. Fiat Mistura.

This mixture gives a white precipitate soon after it is made up, owing to the formation of lead citrate

by interaction between the lead acetate and the citric acid in the lemon syrup. The latter is only required for flavouring purposes, and the same end could be attained by prescribing syrupus simplex and tinctura limonis without any lead citrate coming down at all.

R. Potassii Iodidi	...	...	3ij.
Liquoris Strychninæ	...	...	3iss.
Aquam	...	ad	3iij.

Misce. Fiat Mistura.

Sig. : A dessertspoonful three times a day.

This is a dangerous prescription, owing to the risk there is that the comparatively insoluble strychnine hydriodide will become thrown out in the form of crystals, and settle at the bottom.

R. Atropinæ Sulphatis	...	...	gr. j.
Strychninæ Hydrochloridi	...	...	gr. ij.
Acidi Salicylici	...	...	gr. iij.
Sodii Biboratis	...	...	gr. ij.
Aquæ destillatæ	...	...	3iss.

Misce. Fiat Mistura.

In this case prompt abundant precipitation of the alkaloids atropine and strychnine is brought about by the sodium baborate, and the dangers that might ensue are obvious.

R. Ammonii Bromidi	...	...	3iiss.
Magnesi Sulphatis	...	...	3vj.
Tincturæ Nucis Vomice	...	...	3j.
Spiritus-Chloroformi	...	...	3ij.
Aquam	...	ad	3iij.

Misce. Fiat Mistura.

Immediately this mixture is made up a dense crystalline precipitate is thrown down. This consists of some magnesium salt. The difficulty can be obviated at once by adding water to 6 oz. instead of only to 3 oz., in which case the patient will be told to take double the dose.

PUBLIC HEALTH AND HYGIENE.

THE CAUSATION OF EPIDEMICS.

At a recent meeting of the Epidemiological Section of the Royal Society of Medicine, a paper by Dr. John Brownlee on "Certain Considerations on the Causation and Course of Epidemics" raised an interesting question on which medical opinion seems destined to be divided. The issue received emphasis from another paper read the same evening by Dr. M. Greenwood, of the London Hospital Statistical Laboratory on "The Problem of Marital Infection in Pulmonary Tuberculosis." The titles of the two papers do not suggest an identical problem, but essentially they raise the same question: Does infectivity depend upon the distribution of the infective agent, or upon the susceptibility of the persons exposed? Put thus, it is obvious that the answer is—upon both. Nevertheless, there is a real issue, and although one may cavil at the width of the generalisations implied they serve to mark two distinct schools of medical thought.

If, on the one hand, it be considered how much energy is devoted to the destruction, or to limiting the diffusion, of infective material, it will be seen that underlying this action is the view, perhaps somewhat loosely held, that in this method is to be found the most potent weapon of checking the spread of disease. On the other hand, there are those who, like Dr. Archdale Reid or Professor Karl Pearson, hold that in the varying degree of susceptibility to certain infections is to be found the main condition of epi- or en-demicity. At the risk of unwillingly misrepresenting them it is necessary, in order to understand the issue, to put the two views in opposition.

Why is it, asks Professor Karl Pearson, that the sons of tuberculous fathers show an incidence of tubercular infection which we may represent as .6, while the wives of tuberculous husbands have an incidence which may be represented as .3? The intimacy of a relationship capable of conveying infection is very much greater in the case of husband and wife than is that of father and son. But in the case of a son we have presumably reproduced the tissue vulnerability which in the father was a main determinant of the attack; while in a wife, notwithstanding an unquestionably more intimate exposure, we have the chance insusceptibility which a random sample of the female population identically exposed would show.

We are stating the question somewhat figuratively in our own way, and trust we are doing no injustice to those who find in it support for the view that there is in the population generally a wide variation in degree of susceptibility to disease sufficient to account for some of the chief features of its distribution. It is urged in opposition to this view that the data on which it is based are insufficient or unreliable, and that were there recorded observations sufficiently exact and comprehensive they would show that the distribution of tuberculosis, for instance, coincides with the opportunities afforded to

those, who actually, become infected, of receiving a sufficient dose of the bacilli.

At the present time preventive measures are based mainly upon the supposition that susceptibility to tuberculosis is a common inheritance, and that the decline in the disease is due to the lessened chances of exposure to critical infection. According to Dr. Newsholme, increased institutional segregation of the tuberculous has been chiefly accountable for this diminished exposure; and those who think with him look for further reduction of tubercular mortality by controlling the channels of infection, guarding against personal infection by proper regulation of the life of tuberculous persons, and eradicating the disease from domestic animals, more especially those used for the food of man. If tuberculous meat and milk and sputum are the means of conveying the disease, what more rational pursuit than to eradicate such products? It is urged, on the other hand, that decline in the phthical death-rate cannot be due to a lessened prevalence of infective material or to diminished opportunities of exposure to infection. Urbanisation has led to so much more intimate intercourse of all classes as more than to neutralise any problematical benefit ascribed to workhouse infirmary treatment of advanced phthisis. It is extremely doubtful whether tubercle-infected food is not now as widely consumed as at any period during the decline in tubercular mortality.

The chances of exposure in fact are such to-day that, granted a high degree of susceptibility, it is morally certain that the disease will be contracted. The excessive incidence of the disease, generation after generation, upon certain families, which has for long been observed, is still a phenomenon of contemporary tuberculosis. Its epidemic features remain the same, but there is a lessened volume of the disease. If the potency of infectivity has declined because of more limited dissemination of the infective material why do those hereditarily highly susceptible to tubercle still show the evidence of this in an excessive mortality from the disease?

The real and important element in its causation, it is argued upon these grounds, is the variation in susceptibility, a variation accounted for partly upon grounds of heredity and partly upon grounds of permanent environment. The resistance to tubercle has been reinforced by the better feeding, better housing, and improved hygiene generally which have advanced *pari passu* with the decline of the disease; and in this lessened vulnerability to a specific infection, is to be found (in the case of tubercle at all events) the main cause of its decline.

Dr. Brownlee's paper states that an epidemic dies out because of the exhaustion of susceptible persons or the loss of infectivity of an organism. In certain epidemics such as influenza, where the diffusion of the infection is such that practically everyone is exposed to the infectious material, such an alternative seems probable; but an epidemic of typhoid fever, for

instance, is nowadays usually terminated because the greater part of the population is protected from exposure to the typhoid bacillus. The proportion of persons insusceptible to this infection is probably small, but comparatively few people take the disease because the main channels of its convection have been closed. Smallpox, on the other hand, has been practically abolished in Europe and America by immunising the otherwise susceptible populations to the infection. Secure from intelligent interference, its natural epidemic curve would be comparable with that of measles and influenza to-day.

These diseases, analogous in their high degree of

infectivity, are yet demonstrably modified by variations of susceptibility in those exposed. Disturbance arising from exhaustion of susceptible persons exposed, from interference profoundly modifying the exposure risk for large sections of the community, from accidental variation in the degree of susceptibility, and from the intimacy of the exposure—must necessarily reflect itself in a curve which represents the epidemic reaction to the interplay of all these and other unspecified factors. To speak of the cause of epidemics is thus at the best to refer to a complex of analysed conditions whose correlation is only dimly apprehended.

MEDICO-LEGAL POINTS.

ILLEGAL CREMATION.

At the Lambeth Police Court early in this year a case was heard which has some instructive applications. A woman was summoned for carrying out, procuring, and taking part in the burning of the remains of a child, otherwise than in accordance with the regulations and provisions of the Cremation Act, 1902. An unmarried woman stated that on December 29 she gave birth to a still-born child. She wrapped the body up and gave it to a friend to take to the defendant. The friend carried the body and half a sovereign to the defendant who said that the only thing to be done was to take the body to an undertaker's. They did so, and the defendant asked the undertaker to have the body buried. The undertaker replied that he could not possibly take it without a doctor's certificate. They returned to the defendant's house, and the witness left the body there. The defendant said she would get rid of it the same night, but she expressed much surprise that the dead child should have been sent to her. After the return from the undertaker's the defendant admitted having burned the body in her kitchen stove. The magistrate remarked that it seemed hard that the defendant should be made the scapegoat for the offences of others, but she took upon herself the responsibility of dealing with the body of a child, of the history of whose birth she knew nothing, and brought herself within the section of the Act. She would have to pay a penalty of £10 and 2s. costs within a fortnight.

The method of disposing of dead bodies by burning has always been much used in the East, but in Europe it seems to be opposed to the instincts of most people, and has never been generally adopted. There is, however, no doubt that, apart from sentimental considerations—which are to a large extent based on misconceptions and obstinate prejudices—cremation is, from a purely sanitary point of view, preferable to interment. Sanitary reformers have for some time advocated its adoption in this country, but the general opinion was for a very long time that it was illegal, and consequently cremations seldom or never took place.

A case, however, came before Mr. Justice Stephen, about the time when a strong and earnest advocacy of cremation was being conducted by a small band of reformers in the face of the most

active and virulent opposition: this judge decided that, if conducted in such a way as not to offend public feeling, or prevent proper investigation being made as to the cause of death, cremation is not illegal (*R. v. Price*, 1883). Since that decision crematories have been started, and those who desire to set an example of disposing of the dead in such a manner as to prevent the danger of their poisoning the living can cremate them. In 1902 an Act was passed to legalise and regulate cremations.

Burial authorities are empowered to provide and maintain crematories, and the Secretary of State for Home Affairs is required to make regulations as to the maintenance and inspection of crematories, and to prescribe in what cases and under what conditions human cremation may take place. These were accordingly made in March, 1903.

By Section 8 every person, whether medical or lay, who shall contravene any of the regulations so made, or shall knowingly carry out or procure or take part in the burning of any human remains, except in accordance with the regulations and the provisions of the Act, shall (in addition to any liability or penalty which he may otherwise incur) be liable on summary conviction to a penalty not exceeding £50. Provided that any person aggrieved by any conviction may appeal therefrom to Quarter Sessions. Every person who wilfully makes any false declaration or representation, or signs or utters any false certificate, with a view to procuring the burning of any human remains, shall (in addition to any penalty or liability which he may otherwise incur) be liable to imprisonment with or without hard labour not exceeding two years. Every person who with intent to conceal the commission or impede the prosecution of any offence, procures or attempts to procure the cremation of any body, or with such intent makes any declaration or gives any certificate under this Act is liable to conviction on indictment to penal servitude for a term not exceeding five years. Under the regulations of the Home Secretary no cremation may take place except in a crematorium approved by him, nor until the death has been registered by two independent medical practitioners, and the written authority of the medical referee has been obtained. This must be withheld if any suspicious circumstances come to his knowledge.

THE PRACTITIONER'S RELAXATIONS.

A STUDY OF DABCHICKS.

AMONG fishermen the Dabchick—or, to give him his full title, the Little Grebe—is a much execrated bird. His particular villainy is the consumption of the spawn and the young fry of the fish which the angler desires to reserve for his own special delectation. I would deny the charge if I could, for I like the little scoundrel, but unfortunately my own experience proves its accuracy. In the stomach of a



MALE DABCHICK SITTING.

dabchick shot during the spawning season I have found evidence enough to hang the whole tribe, and I have also seen a dabchick who had choked himself in his endeavour to swallow a stickleback. There is thus no doubt about his sins, and he is guilty of another minor offence most exasperating to the dry-fly fisher—I speak feelingly as one who has suffered—which is his frequent mimicry of a rising fish.

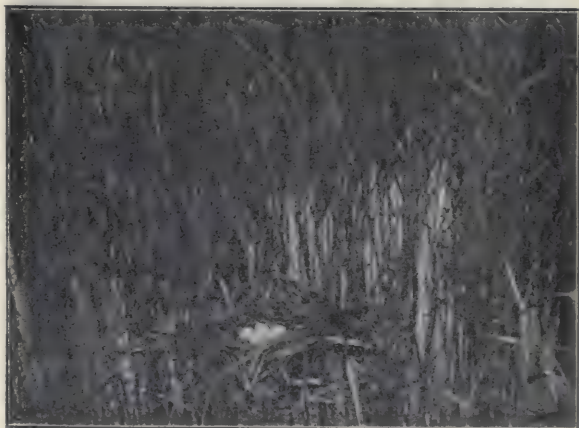
Imagine a day when rising fish are scarce. You are standing on the alert for those spreading concentric ripples which betoken a moving trout, when some subconscious sense bids you turn, and, behold—the very thing you were looking for. “A good fish, too,” you mutter, with a hasty glance to see that the fly is all right. Then the stalk begins, and perhaps you are almost within throwing distance when an inquiring little head pops up from the depths, and the fraud is revealed. This is all very aggravating, especially on a bad day; but still, the dabchick is only doing in another fashion what you yourself are doing—trying to catch fish. And so we come back to his first offence, which is aggravated by the success with which he fishes in all weathers.

Personally I have no serious quarrel with the dabchick. I admit that one may have too many of him, but my experience, in fishing on water wherein the dabchicks are not destroyed as vermin, is that trout abound in spite of him; whence I conclude that there are enough fish in the water for both of us. Moreover, I find him, in common with the many other birds that frequent the banks of our chalk

streams, a perpetual source of amusement when fish are not rising.

To gain anything like an intimate acquaintance with the dabchick in his natural haunts—I except such places as the ornamental water in St. James's Park, where he is so tame as to be almost domesticated—it is necessary to conceal oneself thoroughly, near the nest. There is no difficulty in finding the nest when once one knows what to look for. It consists simply of a platform of river weed floating on the water, either on top of a mass of growing weed which keeps it in position, or cunningly moored to growing rushes or the overhanging branches of a tree—usually a willow or alder. The platform generally takes some time to build, or perhaps it would be more correct to say that it is frequently built some time before it is needed. In due course some four to six white eggs are laid upon it, and these are always carefully covered over with loose weed and other river litter, when the bird leaves the nest. This process serves a double purpose. The covering conceals the eggs, whose whiteness would inevitably attract attention if they were exposed; and the fermentation of the rapidly decaying weeds produces heat sufficient to keep the eggs warm for a long while. Another effect of this perpetual contact with decaying vegetable matter is a remarkable discolouration of the eggs, which by the end of the period of incubation are generally of a pale chocolate or café-au-lait colour.

Although the birds can safely leave their eggs, when well covered, for a considerable period without the risk of their becoming chilled, they do not willingly do so. Both birds sit, the female being the



NEST OF A DABCHICK IN RUSHES.

(Eggs uncovered for the photograph.)

more assiduous of the two, and the eggs are only deserted on the suspicion of approaching danger. The birds are, however, very quick to take alarm, and are endowed with a very keen sense of hearing, whereby they can detect the human voice or human footfall at a considerable distance, and leave the

nest as soon as assured that the alarm is not a false one. For this reason it is extremely difficult to stalk the bird on the nest, and it is almost impossible to force her to leave the eggs uncovered. Given plenty of time she will cover them very thoroughly with a convex pile of weed, but if she is taken unawares she will, with three or four extremely rapid thrusts of her bill, throw enough weed over them to conceal them from view, and will then dive as silently as a vole into the water, reappearing only when she is some twenty or thirty yards at least from the nest.

I have said that in the act of incubation the female is the more assiduous of the two. In so saying, I must admit that I am stating as a fact what is, strictly speaking, only my own opinion. In the course of a prolonged study of a pair of these birds at their nest I soon learned to distinguish the birds apart. One of them sat very persistently: the other which I took to be the male, did a short spell of duty now and again. The chief difference which distinguished the male, as I shall call him, from the female was his slightly stouter body and longer head and bill. Although he was rather slack in the matter of incubation, and very ready to leave the nest on the slightest pretext of alarm, he was prettily attentive in other ways. From time to time he would visit the female as she sat, announcing his approach with a soft tremulous call; would swim round the nest repeating this call very gently with an occasional answer from his mate; and at intervals would dive around his home, returning each time with a wisp of fresh weed in his bill, which he piled carefully around the sides of the nest, and so added daily to its height and bulk. It is the practice of these birds to cover the eggs more heavily as incubation proceeds, so that towards the end of the period the nest when covered may attain at the centre a height of some six to nine inches from the water level.

It was quite obvious to me that a clear understanding existed between the two birds on the subject of what I will call for convenience "changing guard." What I mean by this is that when the time came there was never any degree of doubt in the mind of either bird. The sitting bird would leave the nest with the eggs exposed, immediately upon the appearance of "the relief," and the mate would promptly take up the post of duty; but how the matter was settled I could not discover. During the majority of the visits of the male, the female remained steady at her post, answering his call from time to time, or, with extended neck, helping to arrange the fresh weed he brought up from the deep water. Then, on another occasion, at the first sound of his voice, she would walk to the edge of the nest and dive out of sight, usually without so much as a sound of recognition. The male, I observed, always retired in favour of the female as soon as she reappeared. He evidently did not like incubation, was always fidgetty on the nest, and seized any pretext for retiring from it. I always suspected that his extreme timidity about sounds in the neighbourhood was for the most part simulated.

In approaching and in leaving the nest these birds were models of caution. They approached always from beneath, appearing suddenly under the bank close by, or, on occasions, bobbing up actually

through the outer fringe of the nest itself. Similarly in leaving the nest they invariably dived, either from the nest or at some spot within a few feet of it, and only came to the surface when they had reached the cover of (as a rule) the opposite bank. They are extremely powerful divers, as, indeed, they must be to live (for their food is taken almost entirely under water), and if surprised in a narrow open stream, with little available cover, it is possible, by following him along the bank, to make him swim really extraordinary distances under water.

It is said of the dabchick, as of most regularly aquatic birds, that the old birds carry their young on their backs. I can well believe that this is true, though I have never actually seen it; but I doubt whether it means much more than that the young now and then climb on to the backs of their parents, much as young chickens often sit on the back of the hen in a farmyard. I do not think it likely that the young are at all dependent on such assistance. At a very tender age they are expert swimmers and divers, and I think that, like young ducks and moorhens, they can probably swim as soon as they are hatched, but I have never succeeded in seeing the young actually leave the nest. The particular nest which was the object of my most prolonged investigations was unfortunately destroyed when the eggs must have been within a day or two of hatching out.

I have frequently, when fishing, watched young dabchicks, obviously not more than two or three days old, swimming and diving about in a most masterly fashion, and have been astonished at their hardihood and the impunity with which they dive for concealment under the densest patches of weed, always managing to find an opening through which they can thrust their bills and breathe in security, until a movement of the suspected enemy on the bank warns them to dive again and take cover elsewhere.

I will leave it to the scientific zoologist to discuss the anatomical peculiarities of the dabchick's leg. The method of connection between the fibula and the tibia is, I believe, unique; but I am more interested in the habits of the bird than in its construction. I have admitted his vices, but I venture to plead with the most ardent sportsman to deal gently with him. Seen at a distance he is a dull looking bird enough, and the frequent excursions under the water, which have earned him his popular name, while engaging enough in themselves, are to the fisherman painfully suggestive of the depredations which have made him notorious. But I venture to think that many of his traducers would be inclined to relent if they knew him more intimately. This is not really a matter of great difficulty. All that is necessary is to locate a nest, rig up a rough shelter of three hurdles littered over with brushwood or grass, leave it alone till the birds have become used to it, and then, on a blank day, conceal oneself in it and watch them at leisure. It will be found that the dabchick is not lacking in good looks; while the study of his home life and domestic habits proves so absorbing that his iniquities will, for a time at least, be forgotten and perhaps forgiven.

H. G. M.

POST-GRADUATE MEDICAL SECTION.

THE IDEAL GRADUATE STUDY INSTITUTION.—WHAT GERMANY HAS DONE.

1.—THE CENTRAL COMMITTEE FOR GRADUATE STUDY IN GERMANY.

It is the doctor's task to carry out measures for the preservation of health; the mental and physical labour thus demanded of him is given to serve the well-being of the community.—*Excellenz von Bergmann.*

On May 18, 1900, there was organised in Berlin one of the most important committees for the promotion of post-graduate study in medicine that is to be found anywhere in Europe or America. This committee, which was called into being by a group of enthusiastic members of the medical profession who received the warm and active support of the Prussian Minister for Culture and Education, has since that time done such excellent work and established so excellent a system of graduate study in the whole of the German Empire that it may well serve as a model for other countries. Thus a brief outline of its history and the great progress it has made since its inception must be of interest to everyone who is concerned in the future of graduate study. For the details that follow we are indebted to the courtesy of the Honorary Secretary of the committee, the Director of the Kaiserin Friedrich Haus, Professor Dr. Kutner.

The Central Committee for the Promotion of Graduate Study in Medicine (*Das ZentralKomitee für das ärztliche Fortbildungswesen**) was formed in order to organise graduate study in Prussia on a sound and businesslike basis, and from its inception two main objects were held in view. These were—

1. To enable practitioners to become acquainted with the advance in medicine and its special branches, and to keep in touch with the practical work which such advance necessitates, by offering them the means and the opportunity for special work and progressive development; and
2. To enable practitioners to increase their knowledge, and thereby to augment their usefulness, without the sacrifice of too much time or money.

In order to achieve these desirable objects in a manner most beneficent to general practitioners the committee recognised from the very first that whatever courses or opportunities were to be offered to practitioners these should be available free of charge, so that no member should be put to any expense, even a nominal one, in attending them; that the courses should be held in the immediate neighbourhood of the practitioner's home, and finally that they should be held at times when it was most convenient for the majority of practitioners to attend them. Here at the very start the committee formulated an ideal to which, it is satisfactory to add, it has steadily adhered. This ideal is that the graduate study of the practitioner is not a matter of weeks or months, but a life-long process. The medical man must remain a student if he wishes to keep abreast of modern advance and modern thought, but it is too much, and in fact entirely unnecessary, to expect him to devote a certain specified time daily or yearly to the scientific study of new developments. The ordinary practitioner is much too busy a man to wade through special monographs and transactions, and specialism has nar-

rowed so greatly of late years, and within its limits each speciality has built up so many vast structures, that it is well nigh impossible for him to grasp the essentials of every new step in medicine. Yet, as Professor von Bergmann so aptly expressed it in the sentence that serves as text to this article, the welfare of the community, no less than the interest of the profession, demands that the practitioner should be acquainted with the recent advances in science and that he should follow the development of his art and science. It was necessary, therefore, to give the practitioner a helping hand, and the State, recognising the importance of the matter, stepped in and lent the movement its cordial support. The ideal, accepted by the State as well as by the profession in Germany, has never been lost sight of, and the result is that graduate study in Germany, so far as German practitioners are concerned, is organised on the soundest basis and on lines which leave little, if anything, to be desired.

It is interesting to notice how the committee achieved this gratifying result. It admitted, from the commencement, that it is wrong and unjust to expect qualified men to resume their places among the unqualified students in order to acquire further knowledge. Many a practitioner who would willingly join a graduate class shrinks, from motives which will be appreciated by every graduate, from joining a "mixed class" of the type which obtains in England. Equally was it evident that teachers who possess a reputation as student teachers will not necessarily do for qualified men; the choice of instructors was, therefore, one of the points which the committee had to consider. Finally, there was the question of time and place. In the large University towns, where clinics and laboratories existed, special arrangements had to be made in order to keep to the ideal of pure graduate classes. All this demanded much careful thought and consideration. The magnificent result of which the committee can be proud to-day was not obtained in a day, but it was obtained and it exists as an example of what may be done elsewhere by organisation and systematisation.

The first duty of the committee was to organise the teaching staff and the clinical material, and in this it had the earnest help of the professors and directors of the large clinics and hospitals. Nor was the movement confined to University towns. The ideal was to establish branches in every city that possessed the clinical material, to found centres for instruction at least in each district. At present there are such branches, at which regular graduate courses are given under the auspices of the Central Committee in no less than 27 Prussian and 29 other German towns. Every year the committee publishes a report which shows a gradual but regular increase in the number of branch centres and in the number of graduate students attending these courses. Nor is this all. These reports also furnish German practitioners with valuable information concerning graduate courses in towns outside the German Empire, and the committee serves as an information bureau as well. Yet another and more important result which has been achieved is the establishment of so-called

MEDICAL ACADEMIES.

These have been established in non-University towns which possess a large amount of available clinical material, and are therefore specially suited for graduate study. The

* The English equivalent does not possess the happy terseness of the German "*Fortbildungswesen*," but adequately describes the object of the committee. The real founder of the committee was the late Professor von Bergmann, who, together with several Berlin medical men, organised in 1900 a Society for the Holding of Courses for Practising Physicians, which subsequently adopted its present title on the recommendation of Ministerial Director, Dr. Althoff.

academies at Cologne, Düsseldorf, and the excellent branch at Hamburg, at which centres it is a well-known fact that the best post-graduate courses are given, have been established mainly through the activity of the Central Committee. These academies are in direct connection with the Central Committee. Their medical staffs are connected with the local branch for post-graduate study; their directors are *ipso facto* members of the Central Committee, which has the right to nominate a representative on the board of management of each institution. The result of this triple connection has been a most harmonious co-operation between these institutions and the Central Committee.

The Central Committee, as at present constituted, consists of the Honorary President, Prince von Bülow; three honorary members; of an executive; of extraordinary members representing the Governments of Baden, Bavaria, Saxony, and Wurtemberg; and of ordinary members representing the city of Berlin, the medical societies of Berlin, the committee for the promotion of graduate study in dentistry, the Kultus ministerium, the medical faculty of the University, the committee for medical "Studienreisen," a director of a municipal hospital in Berlin, a director of a non-municipal city hospital, the medical directorate of the Charité, and a representative of the medical profession in the province of Brandenburg; and in addition the presidents of the several local branches. The office of the committee is Luisenplatz 2-4, Berlin, N.W.

When the committee was formed post-graduate courses were only given at irregular intervals at nine centres. To-day regular courses are given at no less than 46 centres in every possible subject, directly or indirectly under the auspices of the committee, and for the most part free. These courses are open to every German practitioner, and are practical and theoretical. Having, through the courtesy of the demonstrators, had an opportunity of attending several of them we can speak from experience of their usefulness. They are in every case arranged to suit the practising physician, to supply his wants and meet his wishes, and, beyond paying two marks as a membership fee, the member who attends such courses has absolutely no expenses, even where the course demands a considerable outlay in instruments and material. The immense educative value of these courses can hardly be over-estimated, and the fact that membership is in every case full shortly after the announcement of each course shows very well how popular they are. From time to time lists of such courses are published. The committee has its own organ—with which we hope to deal later on—and has worked hard and successfully to bring all these opportunities to the notice of practitioners in Germany.

How is it all done? The question of ways and means is always an interesting one, and in this connection it is doubly so. The work has demanded sacrifices and it has cost money. For the first the committee and its supporters have done their share. The professors and teachers have thrown themselves heart and soul into the work, and have had their reward in the success that has attended their efforts. The State and private munificence have seen to the expense, and in many cases the practitioners who have established a local centre have borne their share, though not as members of a course but as private individuals. One of the most remarkable results of the pioneer work of the committee, indeed, has been the enthusiasm and the spirit of emulation it has aroused in other parts of Germany. Practitioners have attended courses away from their sphere of activity, and liked these so much that they have clamoured for and obtained the establishment of local branches. These branches have been encouraged by the Central Committee,

which, helped by a donation from the Ministry for Education, has formed the magnificent

STATE COLLECTION OF DEMONSTRATION SPECIMENS.

Such is the official title of this interesting department, which was formed with the object of providing the various local centres (four only of which at present possess adequate collections of pathological interest) with material for demonstrations. The primary cost of the arrangement was borne by the Kultus ministerium, but the collection has been greatly increased and its usefulness added to by the gifts of private institutions and the donations of individual benefactors. Thus the late Professor Lassar bequeathed the unrivalled private collection of wax models illustrating diseases of the skin, Dr. Siemerling, of Kiel, presented a representative collection of nerve specimens, while from various other sources came valuable additions. A fair number of necessary models and specimens had to be purchased, and as the collection stands at present it may be looked upon as one of the finest and most comprehensive of its kind. It comprises anatomical preparations, general and special; pathological-anatomical preparations, general and special; microscopical preparations, divided into (a) general, (b) special, (c) pathological, (d) clinical, and (e) bacteriological; plastic representations or wax models representing (a) acute infections, (b) chronic exanthems and skin diseases, (c) parasitic and non-parasitic diseases, (d) eye diseases, (e) intestinal diseases; plaster models divided into (a) anatomical, (b) genito-urinary, (c) skin, and (d) throat diseases (among these may be seen the model of the laryngeal cancer of the Emperor Frederick); and papier maché preparations divided into (a) physiological and (b) surgical; books and engravings, photographs, charts and drawings, divided into 27 groups and comprising every possible subject of interest to the physician—a most valuable, and, in some respects, a unique collection, containing as it does the valuable and interesting private collection of medical miscellanea of Professor Hollander; lantern slides—a special department with a very complete collection—and other transparencies; stereoscopic preparations and apparatus; microscopic apparatus; phantoms for demonstration purposes; a very rich collection of cinematographic films, anatomical, physiological, pathological, and clinical, with spare apparatus; and finally, an equally fine collection of bacteriological cultures, permanencies, slides, and projection apparatus.

The collection is in daily use, not only in Berlin but throughout Germany, and if any proof of its usefulness is wanted the Director's day-book, with its large number of entries, is sufficient to show that it is rapidly becoming very popular. Every teacher, every professor or privat-docent who gives a course, whether to graduates or to students, can avail himself of this collection. Let us imagine, for example, that the doctors of a little South German town wish for a course in diseases of the eye. There is, perhaps, one of them who knows his eyework well and who is able to give this course, but under usual circumstances the clinical material available is far too small to permit of regular study. So there comes an application to the Director, "Please send, by return post, models and specimens to illustrate course of ophthalmology." These are sent at once, packed, registered, and catalogued, with histories and full particulars. The applicant pays cost of carriage and insurance and undertakes to return the specimens as soon as he has finished the course. So, too, in other departments. A local doctor is asked to give a course on first aid to the senior pupils of the gymnasium, to deliver a lecture on tuberculosis, or to demonstrate the advisability of vaccination. He, too, sends to the Director and avails

himself of the magnificent collection, and is thereby enabled to illustrate his lecture or course in a very efficient and comparatively inexpensive manner. There are models here that have travelled all over Germany, doing useful work wherever they went, and the practical advantages of such a collection on such lines are incalculable. Its educative value is enormous, not merely from the point of view of graduate study, but equally so from that of the popular lecturer. The doctor can do much to influence local thought and opinion in matters of hygiene and public health by means of occasional public and popular lectures. Such occasional excursions will be of value to him as well as to his hearers, and many practitioners will take a larger interest in what is as much their duty as the writing of prescriptions if they were certain of such help as this collection assures the German practitioner. In conclusion, it is merely necessary to add that a full and detailed catalogue of the collection has been printed, which is forwarded on application to every practitioner in Germany. In special cases,

the Director assures us, arrangements can be made to enable lecturers outside Germany to avail themselves of the collection as well.

Another feature of the work of the committee has been the development of post-graduate courses in dentistry. These courses are exceedingly popular and their educative value is daily becoming more apparent. Not the least remarkable of the results which have been obtained by this effective organisation is the almost universal recognition in the German Empire of the necessity for such graduate courses, and the interest which has been awakened by the labours of the committee in the profession generally and in the several States. The latter have supported the movement in a most exemplary and praiseworthy manner, and it is not too much to declare that the Central Committee at present is a national asset of the German Empire which does as good work, and is claiming as effective support and obtaining it, as the various Universities that cater for the student and for the medical practitioner up to the time that he is launched into practice.

HOSPITALS AND THE BUDGET.

A MEMORIAL signed by the chairman and treasurer of several of the most important institutions, representing amongst others the following hospitals, was forwarded to the Chancellor of the Exchequer on June 25th:—Cancer, Charing Cross, General Hospital Birmingham, General Hospital Bristol, General Infirmary Leeds, Great Northern Central, Guy's, Hospital for Sick Children, Hospital for Consumption Brompton, King's College, King Edward's Hospital Fund, London, Meath Hospital, Middlesex, Poplar, Queen Charlotte's, Queen's Hospital for Children, Royal Free, Royal Infirmary Liverpool, Royal Infirmary Manchester, Royal Infirmary Sheffield, Royal National Hospital for Consumption Ventnor, Royal London Ophthalmic, Royal Victoria Hospital Belfast, St. Luke's Hospital for Lunatics, St. Mary's, St. Thomas', Seamen's, University College, Victoria Hospital for Children, Westminster. The memorial is also supported and signed by representatives of a number of the greater charities of various kinds.

The text of the memorial is as follows:

"As the representatives of many of the largest and most important hospitals and charitable institutions in the kingdom, we desire to bring to your notice the effect which certain of the Budget proposals will have upon the incomes of these and similar charities.

"We submit that these institutions, in carrying on the work for which they have been organised, are, in a large measure, aiding the State by protecting, maintaining, and educating orphan, destitute, and feeble-minded children; by saving life; by nursing the sick, and fighting against disease; by caring for the afflicted; by providing for the necessities of our soldiers and sailors, their widows, and orphans; by succouring mariners shipwrecked upon our shores; by paying annuities to thousands who would otherwise be in the workhouse; by creating a more civilising public opinion; and by materially assisting in carrying out the laws of the land.

"Work so widespread and affecting the welfare of so many of his Majesty's subjects has, we feel, special claims upon the consideration of his Majesty's Ministers, and we are assured of your attentive interest on its behalf.

"In the first place we beg to point out that a large proportion of the revenue of all important charities is derived from legacies, and that it is becoming an increasing practice of testators to leave either the whole or a part of their residuary estates for charitable purposes. It is the experience of some of the institutions represented that of all bequests they receive, from 15 per cent. to 25 per cent. are

from residuary estates; and, with our intimate knowledge of the finances of these hospitals and societies, we view with alarm the diminished receipts which must result in consequence of the increased estate, succession, and legacy duties which it is proposed to levy, and, in a lesser degree, as a result of the newly suggested method of valuing agricultural land for estate duty.

"All these additional duties will, in so far as they are payable out of the estates, proportionately reduce the residues received by the charities to which they have been bequeathed. The annual loss to them will amount to many thousands of pounds, which must necessarily mean a curtailment of the work they carry on.

"The seriousness of the position is aggravated by the fact that of late years charities have found it very difficult to raise sufficient funds to meet the growing demands made upon them. Increased taxation had already been urged by many contributors as a reason for the discontinuance or reduction of their gifts.

"We would earnestly ask that you will seriously consider whether the Finance Bill cannot be so amended as to grant exemption from legacy duty to bequests which, in the opinion of the commissioners, are for charitable purposes, in order that these institutions may be compensated for the loss of income which they will suffer in other directions.

"We would respectfully suggest that this exemption might be conveniently granted by a method similar to that by which charities now claim the repayment of income tax deducted from dividends upon their investments. This would secure a minimum loss to the national revenue, and would give to the commissioners discretionary powers as to the classes of charities entitled to exemption.

"Second, we further desire to ask that Section 25 of the Bill may also be amended so as to exclude from increment value duty land sold or let by charities for their benefit in any sense whatever. In this connection we would point out that the section as at present drafted would very seriously affect many institutions, such as hospitals, upon removal of their premises from one site to another.

"In conclusion may we urge that, inasmuch as the claims of charities to preferential treatment have already been recognised with regard to certain of the new financial provisions, it is not inconsistent to ask for these additional concessions that charitable institutions, which are admittedly doing great and beneficent work for the nation, may not be hampered by such severe losses as the present proposals of the Finance Bill would entail upon them."

NEWS AND COMING EVENTS.

At the annual general meeting of the London Nottinghamshire Society, held on June 24, Mr. Sydney Stephenson, M.B., F.R.C.S., was elected President of the Society for 1909-1910. Mr. Stephenson has been for some time past editor of *The Ophthalmoscope*.

The Raymond Horton-Smith Prize in the University of Cambridge for 1909 for the best Thesis during the past year for the Degree of Doctor of Medicine has been awarded to Mr. Henry Hallett Dale, M.A., M.B., B.C., of Trinity College. Mr. Cecil Herbert Winter Page, M.A., of Corpus Christi College, was adjudged *Proxime accessit*.

The therapeutical and pharmacological section of the Royal Society of Medicine will meet at Cambridge on July 10, at 3 P.M.; there will be demonstrations in the Pharmacological Laboratory by Professor W. E. Dixon and others, and at 6.30 P.M. the dinner will be held in the Hall of Downing College.

The governors and medical staff of Guy's Hospital will give a garden party on Thursday, July 8, at 3.15 P.M., when the medals and prizes for the year will be distributed to the successful students by his Grace the Duke of Devonshire. The laboratories, museums, college, the Henriette Raphael Nurses' Home, and wards will be open to inspection from 3 to 5.30 P.M. Music will be provided in the grounds. Academic costume will be worn.

DR. JAMES DOUGLAS, of Quebec and New York, has founded the Douglas Studentship for research in Actino-Therapeutics, with special reference to cancer, at Guy's Hospital Medical School. The studentship is tenable for one year, is of the value of £300, and is open to all persons who possess a registrable British medical qualification. The student will be required, unless otherwise permitted by the Treasurer, to carry on his investigations at Guy's Hospital, under the supervision of the surgeon to the Actino-Therapeutic Department.

We regret to announce the death, which occurred last week at Edinburgh, in his sixtieth year, of Professor Daniel John Cunningham, M.D., F.R.S., LL.D., D.C.L., D.Sc., etc., Professor of Anatomy in the University of that city, and Dean of the Medical Faculty. Professor Cunningham's name and works are well known to all British students and practitioners of medicine. His father was Principal of St. Mary's College, St. Andrews, and he himself proceeded from Crief Academy to Edinburgh University, where he graduated M.B. in 1874 and M.D. in 1876. After holding the post of Demonstrator of Anatomy in that University he was appointed to the Chair of Anatomy and Surgery at Dublin University, which he vacated in 1903, after 20 years' excellent service, to become Professor of Anatomy in his old University. Professor Cunningham, among his many appointments, had held the post of Examiner in Anatomy to the Universities of Oxford, Cambridge, Edinburgh, London, and Victoria, and in examinations for the Services as well as that of President of the Royal Zoological Society of Ireland and Vice-President of the Royal Dublin Society. He was a member of the South African Hospitals Commission and the Vice-Regal Commission on the Inland Fisheries of Ireland. His most important literary activities were the authorship of his exceedingly popular and useful Manual of Practical Anatomy; the editorship of the valuable Textbook of Anatomy which bears his name; and the acting editorship of the *Journal of Anatomy and Physiology*.

The Chesterfield Medal in Dermatology, issued by St. John's Hospital for Diseases of the Skin, Leicester Square, has this year been awarded to Dr. C. A. McBride, M.D., L.R.C.P.

NEWS has been received from the Sleeping Sickness Camp, near Kisii, British East Africa, of the death, from malaria, of Dr. Henry Hugh Baker, at the age of 31. Dr. Baker was educated at University College, Oxford, and St. Mary's Hospital, London, and qualified in 1905. He was Government Medical Officer at Nairobi, British East Africa, and had previously been Medical Officer at Kharga Oasis, West Egypt.

The annual meeting of the Poor Law Medical Officers' Association will take place on Tuesday, July 6, at the Guildhall, London, when a conference of the Poor Law medical officers of England and Wales, to consider the recommendations of the Royal Commission on Poor Law Medical Relief, which will be opened by the Lord Mayor in the Council Chamber at 11 A.M. Papers will be read by Dr. Major Greenwood, D.P.H.; Mr. C. S. Loch, Secretary of the London Charity Organisation Society; Mrs. Sidney Webb; Dr. F. S. Toogood, Medical Superintendent, Lewisham Infirmary; and Dr. G. F. McCleary, M.O.H., Hampstead. The papers will be followed by discussions. The annual dinner will be held at the Waldorf Hotel, Aldwych, London, at 7.30 P.M. on the same evening, when Surgeon-General Evatt, C.B., President of the Association, will preside. The price of tickets is 7s. 6d., exclusive of wine. Poor-law medical officers wishing to be present should communicate with the Hon. Secretary, Dr. Major Greenwood, 243 Hackney Road, N.E. Ladies are admissible as guests, as well as to afternoon tea at the Mansion House from 3.30 to 6 P.M.

On June 24, the Festival of St. John Baptist, the members and associates of the Order of St. John of Jerusalem in England held their annual commemoration service at St. John's Parish Church, Clerkenwell, the anniversary sermon being preached by Bishop Ormsby, Sub-Prelate of the Order. Afterwards the General Assembly was held in the Chapter Hall at St. John's Gate. Reports were received from the Committee of the British Ophthalmic Hospital, Jerusalem, belonging to the Order, and from the Committee of the Ambulance Department.

NEW APPLIANCES & THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

FLAVOURED SANATOGEN.

(THE SANATOGEN CO., 12 CHENIES STREET, LONDON, W.C.)

SANATOGEN is now so well known to the medical profession as a therapeutic and dietetic agent that further description of it is unnecessary beyond the reminder that it contains assimilable organic phosphorus. Certain patients, however, object to the flavour of the ordinary Sanatogen. It is well known that the taste of a substance and the immediate psychical sensations to which it gives rise have always some influence, and in neurotic patients an important influence, upon its digestibility. In order to prevent the flavour of Sanatogen diminishing its range of utility its manufacturers have now put upon the market a "Flavoured Sanatogen." The result in our opinion is satisfactory. The flavour is distinct, but not too pronounced, and the new article should be an acquisition to those medical practitioners whose patients included some who disliked the natural flavour of the old Sanatogen and therefore shrank from using it.

NURSING ADMINISTRATION.

THE COST OF NURSING PER BED.

In a preceding article the cost of each nurse to the hospital, less the collective items included in the nursing homes and shared by all alike, was examined, the figures being taken, together with those in this article, from *Burdett's Hospitals and Charities*, 1909. The tables showed that while very little difference is to be found in the style of living at these various establishments, the bill of fare for the nurses presenting practically the same features in each, the cost was at least £18 more per year a head, if uniform be reckoned, in the London Hospital than in Guy's, the one which headed the list for economy. In provincial hospitals it cost £7.2 a year more per head at the Leeds General Infirmary for the maintenance of the nurse than at the Radcliffe, Oxford. In Scotland a nurse cost £9.8 more a year at the Glasgow Royal Infirmary than at the Dundee Royal, and £7.7 more than at the Edinburgh Royal Infirmary. There are 251 nurses at Guy's Hospital. If the cost of each nurse were increased by £18, the additional cost to the hospital would be £4,518. There are 441 nurses at the London Hospital. If the cost of each nurse were reduced by £18, the saving effected would be £7,938. If the Royal Edinburgh Infirmary spent as much over each nurse as the Glasgow Royal, it would make a difference of over £2,094 in the yearly cost. If the Glasgow Royal could reduce the cost of each nurse to the level of the Dundee Royal, it would save £1,666 a year.

The cost of the nursing in any hospital per bed depends mainly, though not exclusively, on the average number of nurses employed in proportion to the patients, a proportion generally estimated by excluding such nurses as are engaged in out-patient work or in other departments outside the wards, and by dividing the number of beds among the remainder. Nurses required to enable the staff to take leave and holidays are included in these totals, experience showing that skill in organisation makes a wide difference in the numbers required for this purpose. It is to be observed that decimals are of considerable importance in this mode of reckoning, it having been calculated by the author of "The Matron's Duties and Responsibilities" * that "the difference between 2 beds and 2.1 beds apiece is almost exactly a difference of two nurses on every 100 beds."

The curious thing in the following table is that whereas in Scotland there is but just over 30s. between the highest and the lowest average, and only £3 12s. difference in the provinces, yet in London the variation in cost is £11.1, extending from £18.2 to £29.3, the latter figure not including uniforms. It would cost Guy's £5,716.5 to raise the expenditure on the nursing per bed in proportion to that at the London. The London Hospital would save £8,791.2 per year if it could reduce the cost of the nursing per bed to the Guy's average. It does not by any means follow that the

cost of nursing at one hospital can be made to approximate to that at another. But it is remarkable that such wide variations are seen to occur in the same class of hospital and in the same town.

TABLE A.—HOSPITALS WITH MEDICAL SCHOOLS.

	Daily Average of Occupied Beds	Total Nursing Staff	Average No. of Occupied Beds to Each Member of Day and Night Staff	Cost of Nursing per Bed £
<i>London—</i>				
Guy's	515	251	2.3	18.2
University College	244	103	2.7	17.5*
Royal Free	138	62	2.3	19.8
St. Mary's	257	112	2.6	20.9
King's College	189	87	2.3	21.0
St. Thomas's	480	192	2.6	21.2
Middlesex	270	117	2.5	22.6
St. George's	319	147	2.3	24.5
St. Bartholomew's	575	288	2.2	25.4
London	792	441	2.0	29.3*
<i>Provincial—</i>				
Leeds General Inf.	368	95	4.0	11.0
Oxford Radcliffe	116	41	3.4	12.6
Cambridge Addenbrookes	107	37	3.2	13.6
Birmingham General	305	106	3.2	13.7
Birmingham (Queen's)	121	44	3.1	14.6
<i>Scotch—</i>				
Dundee Royal Inf.	276	94	3.3	12.1
Edinburgh Royal Inf.	832	272	3.2	12.3
Glasgow Western Inf.	544	176	3.3	12.7
Glasgow Royal Inf.	593	170	3.8	13.0
Aberdeen Royal Inf.	228	81	3.0	13.7
<i>Irish—</i>				
Belfast Royal Victoria	223	77	3.2	13.7

* Minus uniforms.

The variations in cost displayed in Table B are even more striking, the cost of the nursing per bed ranging from £12.7 at the Seamen's Hospital to as much as £31.4 at the Miller, where, however, the enormous out-patient department in proportion to the small number of beds must be allowed for. In the provinces the range of variation in the medium-sized General Hospitals is £11.2, from £9.6 at the Kent and Canterbury to £20.8 at the Chester General.

TABLE B.—GENERAL HOSPITALS WITHOUT MEDICAL SCHOOLS.

	Daily Average of Occupied Beds	Total Nursing Staff	Average No. of Occupied Beds to Each Member of Day and Night Staff	Cost of Nursing per Bed £
<i>London—</i>				
Seamen's	247	64	4.3	12.7
Great Northern Central	147	54	3.1	16.0
Bolingbroke	29.5	18	1.9	20.6
Poplar	78	36	2.4	23.8
Miller General	22.1	13	3.1	31.4
<i>Provincial—</i>				
Kent and Canterbury	77	23	3.6	9.6
Northampton General	148	44	3.7	10.9
East Suffolk & Ipswich	105	30	3.8	11.0
Stoke-on-Trent Inf.	165	50	3.5	11.6
Worcester General	114	33	4.3	11.7
Bradford Royal Inf.	181	61	3.5	12.5
Wolverhampton & Staff.	150	52	3.2	12.6
Cardiff Infirmary	168	57	3.3	13.3
York County	101	41	2.8	14.2
Royal Devon & Exeter	155	52	3.4	15.0
Norfolk and Norwich	166	54	3.6	15.6
Royal Berkshire	145	51	3.2	16.6
Leicester Infirmary	176	64	3.1	17.3
Taunton and Somerset	90	43	2.3	19.9
Chester General	93	44	2.4	20.8
<i>Scotch—</i>				
Ayr County	48	18	3.0	14.0
Dumfries and Galloway	73	25	3.3	14.8

* London: The Scientific Press, 28 & 29 Southampton Street, Strand.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, JULY 5 to 10.
ROYAL SOCIETY OF MEDICINE, 20 Hanover Square, W.

At 7.45 p.m.

July 8, Obstetrical and Gynecological Section.

At 3 p.m.

July 10, Therapeutical and Pharmacological Section, at Cambridge.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

July 5, Dr. Colcott Fox, Skin.

July 6, Dr. Harry Campbell, Medical.

July 7, Mr. Thomson Walker, Surgical.

July 8, Sir Jonathan Hutchinson, Surgical.

July 9, Mr. R. E. Bickerton, Eye.

At 5.15 p.m.

July 5, Dr. Purves Stewart, Paralysis Agitans.

July 6, Mr. Cecil H. Leaf, Surgical Treatment of Cancer of the Rectum.

July 7, Dr. A. F. Tredgold, Feeble-minded Children.

July 8, Dr. James Collier, Acute Polyneuritis and Landry's Paralysis (illustrated by cases).

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.

At 3.45 p.m.

July 6, Dr. Atkinson, The Nose.

July 9, Dr. Dan McKenzie, The External Ear.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich, S.E.

At 2.15 p.m.

July 8, Prof. Hewlett, Artificial Immunisation in Infective Diseases.

At 2.30 p.m.

July 8, Dr. Rankin, Headaches and their Treatment.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

July 6, Dr. James Taylor, Treatment of Nervous Diseases.

July 9, Dr. Gordon Holmes, Familial Ataxia—Friedreich's Disease.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.

At 4 p.m.

July 8, Dr. Still, Erythema Nodosum.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

July 6, Mr. J. H. Evans, The Cesspools of the Body: Procedures of Surgical Drainage.

July 9, Mr. R. P. Brooks, Subconjunctival Injections in the Treatment of Eye Disease.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

July 5 and July 8, Surgical Registrar, Demonstration.

July 9, Medical Registrar, Demonstration.

At 12 noon.

July 5, Dr. Bernstein, Pathological Demonstration.

At 12.15 p.m.

July 6, Dr. Pritchard, Practical Medicine.

July 7 and July 10, Dr. Grainger Stewart, Practical Medicine.

At 5 p.m.

July 5, Mr. Bidwell, Practical Surgery.

July 6, Dr. Seymour Taylor, Valvular Disease: Aortic Regurgitation.

July 6, Dr. Pritchard, Clinical Pathology.

July 7, Dr. Beddard, Medicine, V.

July 8, Mr. Edwards, Clinical Lecture.

July 9, Mr. Armour, Clinical Lecture.

EDITOR'S LETTER-BOX.

SANITATION IN THE WEST INDIES.

To the Editor of THE HOSPITAL.

The Incorporated Liverpool School of Tropical Medicine, Johnston Tropical Laboratory, University of Liverpool.

SIR,—In your issue of June 19 you contrast the statements of Sir Rubert Boyce and myself on this matter; but I should like to point out that my strictures refer to the past ten years, while Professor Boyce's experiences refer only to the last few months. Moreover, my strictures were of a general nature and based, regarding the West Indies at least, on information supplied to me by others, and especially on certain defective reports. Sir Rubert Boyce, being rather new to this business, is probably more optimistic than an old hand like myself. I sincerely hope, however, that now, as a result chiefly of his own active interest in the matter, something worthy of the name of antimalaria campaign will be done in the colonies you refer to. I may add that an expedition of ours which has just returned from Jamaica (which was not visited by Professor Boyce) did not describe any very extensive anti-mosquito campaigns undertaken there.

Yours faithfully,

June 23, 1909.

RONALD ROSS.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For CONSTIPATION.

Professor D. LAMBL, of Warsaw, Professor of Clinical Medicine at the University, writes—

"Hunyadi János Bitter Water, besides being an excellent general aperient, has proved specially efficacious in the treatment of chronic constipation, venous obstruction and congestion, hæmorrhoids and obesity.

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label. [1]

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 124, VOL. V. [No. 1196, VOL. XLVI.]

SATURDAY, JULY 10, 1909.

DEMORALISING BOOKS.

At a recent meeting of the Mothers' Union the members pledged themselves to a campaign against demoralising books. This opens up a topic upon which the opinion and advice of the family doctor is nowadays becoming more and more in requisition. The Union's enterprise is no light one if any measure of collective action is seriously contemplated. Of course, within the narrow circle of a family much may be done by judicious selection of literature. But opinion, even among the most righteous and sober members of society, differs so widely in its estimate of what is and is not demoralising to the youthful mind that concerted action by a large body of individuals is almost inevitably doomed to failure and confusion.

As a writer in the *Times* observes, there are roughly two classes of bad books. One comprises those whose *raison d'être* is the provision of prurient matter, books which make no pretence of any higher aim than an appeal to sensuality. On this class there cannot be two opinions: they are patently, even professedly vicious, and every decent-minded person condemns and deprecates them. But there is a far larger class in the estimate of which wide differences of opinion exist, even among persons whose education, breeding, and moral standards seem identical. For views on the subjects which ought and ought not to be dealt with in literature likely to find its way into the hands of the young are as varied as human nature itself. They are determined largely by tradition, by temperament, and by individual susceptibility to suggestions conveyed by books. Thus each man is driven to judge of the effect of a particular book upon others by experience of its effect upon himself, and none but the most self-opinionated can have unlimited confidence in a judgment based upon so insecure a foundation. It is a well-worn maxim among foreign nations that we English, while as frail as the rest of the civilised world, yet cherish a mistaken notion of national superiority because our backslidings are not flagrantly displayed; that, in fact, we share the vices of other nations, and add to them the crowning vice of hypocrisy. No doubt there is

some truth in this cynical commentary, but we are insular enough to believe that it is better not to flaunt and glorify vice, even though we permit it, as many think unwisely, to flaunt itself in our streets. Nevertheless, too rigid an exclusion of knowledge on sexual subjects from the educational schedule often over-reaches itself. The very mystery in which it is all enveloped is itself a stimulus to the ready curiosity of youth, which a plain statement of human natural history would satisfy and perhaps deflect into paths of innocent and profitable inquiry. If then we are agreed that it is wise and right to acquaint the young with the formal elementary facts of sex, general agreement seems impossible as to where the line should be drawn between permissible and unpermissible themes. We cannot envy the Mothers' Union the task of achieving unanimity in their censorship of literature. But although any rigid test of suitability for juvenile books seems quite impracticable, one can at least formulate the general lines along which these books may proceed with safety and advantage. Fortunately, the average healthy adolescent cares little for subtleties of character-drawing, but much for thrilling tales packed full of movement, surprises, and adventure. Therefore the writer for the young need not fret himself with analyses and paradoxes of character, but can boldly stamp his puppets good and bad and pass at once to incident. This was the course adopted by the ever-to-be-regretted Henty and Kingston. Artistic literature is thrown away upon the young. At a time when character is still in the making the ideals submitted to it may be crude and overdrawn, provided they are high; and the writer who, for educative purposes, makes virtue always triumphant is lying in a good cause.

In general terms, then, one may say that the more a book is devoted to the exaltation of crude ideals of courage and virtue expressed in conduct under difficult circumstances, the more likely is it to mould character favourably. It is surely better to enter manhood or womanhood with too high than too low a conception of virtue, and better to endure the recurring disillusionments which real life has in store

for the optimist, than to leave adolescence a cynic already full-blown. As to the admissibility of sexual references in books for the young we do not pretend to lay down the law, but we believe strongly that such knowledge of sex matters as the young require should be given formally and openly by parents and guardians, or by the family doctor, but not by storytellers, who may in all, and with the best of intentions, do more harm than good. The intimate post

of friend, arbiter, and adviser held by so many physicians in the family councils of their patients, both in times of sickness and of health, is at once a high honour and a great responsibility; and the frequency with which this relationship involves quasi-medical decisions upon the ethical no less than the physiological aspects of sex, is our excuse (if any indeed be necessary) for this ventilation of so homely a subject.

THE TEACHING OF TEMPERANCE.

WE have received a copy of the syllabus of "Lessons on Temperance for Scholars attending Public Elementary Schools," issued by the Board of Education as a model syllabus, to which all teaching on this subject in elementary schools should conform in principle and, indeed, so far as possible also in detail. The syllabus is divided into three sections, of which the third is exclusively designed for children over the age of twelve, and consists in essence of a description of the evil consequences of alcoholic excess. The first section deals mainly with food and drink in general, and the second is given up to alcoholic beverages and their effects. The whole syllabus is to be covered in three lessons at the most.

Now the inclusion of elementary hygiene in the teaching of elementary schools is obviously commendable, and it is right that this should include the elementary facts of the physiology of food and drink. But in this syllabus the term temperance clearly refers throughout to alcoholic beverages and not to food and drink in general. This, we venture to think, is a mistake. The great principle to inculcate is temperance in all things, the greater including the less. There are, however, in the syllabus certain "notes," intended to provide the teacher with a sound basis of scientific fact and principle upon which to found his instructions. We regret that these statements, in our opinion, are open to serious criticism. They convict their compiler of some measure at least of bias and inaccuracy and confusion of thought, scarcely appropriate to the preparation of an authoritative official syllabus.

In the first place pure alcohol is confused throughout with alcoholic beverages, and although the effects of alcoholic excess are described in detail, the broad fact that throughout the centuries the great majority of mankind have drunk alcoholic beverages without ill-effect is entirely withheld. No attempt is made to explain to the child why civilised communities have continued to find pleasure and profit in the moderate consumption of alcoholic beverages, and the fact is withheld from them that in the preparation of many beverages prized by mankind for their taste, thirst-quenching, and nutritional prop-

erties, alcohol is essentially a by-product rather than an active ingredient. The alcoholic content of ginger-beer is overlooked, as is the fact that the Excise authorities for the purposes of inland revenue ignore the alcoholic nature of a beverage which contains less than 2 per cent. of proof-spirit.

To turn from errors of omission to those of commission we cannot agree that bottled beer contains on an average 7 per cent. by volume of alcohol, and that Lager beer usually contains as much as 4 per cent. We entirely disagree with the remarks made concerning the nutritive value of good beer. THE HOSPITAL has this year dealt exhaustively with the whole question of beers, and published the results of close investigations into the chemical composition and dietetic uses of malt liquors; and the conclusions derived from the report of THE HOSPITAL Commission are entirely at variance with the dicta of the Board of Education syllabus. Good beer under suitable circumstances is peculiarly well adapted to the quenching of thirst, and fulfils accurately the physiological requirements of the thirsting body. The bold dogmatic statement repeatedly made that water is the best fluid to drink surely demands some qualification and explanation. If the child is told that the best drink is water, some rough directions at least should be supplied for the discrimination between good water and bad water. The assumption is that any water is drinkable. We have the true cause of temperance at heart, but we must repeat once more that enduring temperance teaching can only rest upon a solid foundation of scientific accuracy. When the child finds that certain of the statements he has been dogmatically taught will not stand the test of adult experience and reflection, there is danger that the many truths contained in this syllabus will be overshadowed and discredited and will bear no fruit. The Board of Education cannot be congratulated upon its syllabus for the teaching of temperance; but we still hope that those who are obliged to use it for the instruction of their pupils will bring to bear upon it all their common sense and impartiality and knowledge of the world, and thus learn to discriminate between its wheat and tares.

ANNOTATIONS.

Graduated Work for Consumptives.

To every medical man who takes an interest in the progress of practical therapeutics and watches the trend of modern research, the system of graduated exercises and work first introduced and extensively tested by Dr. Paterson, of the Frimley Sanatorium, has been known by repute for some time. To the public at large, excluding those patients who have actually experienced it and their relatives, it was probably quite unknown until the report appeared in the newspapers of Dr. Paterson's lecture on this subject at the Conference on Tuberculosis, held last month in the Whitechapel Art Gallery. Graduated work, apart altogether from its beneficent effect as a therapeutic measure—which may be due to the promotion of auto-inoculation, as Dr. Inman believes—has aspects of a less strictly technical and medical kind, and on those aspects the lecturer laid a particular stress, which was by no means greater than they deserved. He quoted very aptly the aphorism of Dr. Kingston Fowler, that "a fool never recovers from consumption"; an aphorism which, if not invariably true, contains a most important warning and lesson. For it is the active co-operation of the patient and his own intelligent comprehension of and assistance in the sanatorium regimen which is vital and essential to the success of that form of treatment of tuberculosis. Physical improvement has indeed a psychological effect, as Dr. Paterson has said, and it is hardly less true that psychological well-being influences the results of physical therapeutics. Above all, graduated work tends to prevent the lethargy and laziness which has proved the ruin of many labouring men restored to health by sanatorium treatment; and by labouring men we do not mean those only who labour with their hands. Another important point is that the work performed should be of some practical utility, and not a mere ploughing of the sands; and yet a further advantage, of both medical and sociological importance, is that the discharged patient is fit to resume his employment the moment he returns to his home, thus avoiding the risks of insufficient nutrition due to penury. As an example of a combination of sound therapeutics with practical economics, Dr. Paterson's system is hard to beat.

Lord Strathcona and McGill University.

DOMINION DAY, as July 1 is known in Canada, has this year been celebrated by an act of munificence on the part of Canada's grand old man, Lord Strathcona, towards the McGill University at Montreal, and especially towards the medical school therein. The benefaction consists of a sum of £100,000, of which it is stipulated that nine-tenths is to be devoted to the completion of the medical faculty buildings now in course of reconstruction, while the remaining £10,000 is to go towards the fund for the augmentation of the salaries of professors. Lord Strathcona is Chancellor of McGill University, and hence may be supposed to have an especial affection for that foundation; but it must not be overlooked that this is only one of a long series of educational endowments in Canada,

for, amongst other things, he founded, built, and endowed the Royal Victoria College for Women. His last princely donation is not his only one, even to the McGill Medical School, for he long ago founded the chairs of hygiene and pathology, and in 1907, after the engineering and medical schools had been destroyed by fire, he presented a site and £60,000 for the replacement of these schools. With this sum the authorities projected a building not merely worthy of Montreal and Canada as they stand to-day, but designed to maintain a prominent place in the future greatness of the Dominion. With a confidence which speaks volumes for Canadian ideals and standards, a building was started, the total cost of which was to be at least £150,000, and it is the residue of this sum which has now been provided by the generosity of the Chancellor. McGill University has already a most honourable history, especially as regards its medical faculty, and there can be little doubt that, thus supported and endowed, it will long retain its proud position of the premier university of Canada, and its successful rivalry with the sister corporations within the territory of the United States. Placed in the centre of the French-speaking population of Canada, it has yet attracted teachers and pupils, not only from its own province, and from the rest of the Dominion, but also from over the border, and even from over the Atlantic. The practical munificence of Lord Strathcona can only have the effect of widening the usefulness of his university, an object which commands the sympathy of the medical profession in Britain as much as in Canada itself.

The Preservation of Bodies.

DR. COLLINGRIDGE, medical officer of health for the City of London, announces in his last monthly report that Dr. Reichter's apparatus for the preservation of corpses has now been installed, and is in working order at the City Mortuary in Golden Lane. The body of an unknown man, which had been found drowned, was brought to the mortuary on March 10, and after a post-mortem had been made, it was kept in the apparatus from March 16 until April 29, when it was removed to the mortuary. Up to the date of the report the body remained in perfect condition for identification. Having regard to the fact that a month is the limit of time for which it is necessary to preserve bodies for this purpose, this practical test shows that Dr. Reichter's apparatus is most satisfactory and fulfils all requirements. The temperature during the seven days' trial varied greatly, the highest recorded being 73deg. Fahrenheit during the last week in May. The apparatus consists essentially of an airtight case in which a saturated solution of formic aldehyde is allowed to evaporate, and the air meanwhile is kept in circulation by means of a small fan. In addition to the preservation of bodies for identification, the apparatus is well suited for the inspection of bodies by coroners' juries or by relatives. The cost of formic aldehyde amounts only to a few pence per day, and thus economy can be added to the merits of this valuable apparatus, which seems certain to meet a long-felt public want.

MEDICAL OPINION AND MOVEMENT.

VARIOUS hypotheses have been conceived and formulated to explain the mechanism underlying the Treatment of Inflammatory Conditions by Bier's hyperæmic congestion. The most recent and most generally accepted is that of Sir Almroth Wright, which supposes that the hyperæmia induces a local increase in the immunising powers of the tissues or fluids. Attempts have accordingly been made to test this theory and to ascertain experimentally whether in conditions of hyperæmic congestion there is evidence of an increase in the immunising substances. Kleinberger, experimenting with rabbits, has studied the influence of passive congestion upon the production of agglutinins and hæmolysins. He confined his observations to these substances because they can be determined quantitatively and admit of control comparisons. As a result he finds that under the influences of passive congestion the formation of agglutinins is more rapid and also more abundant in comparison with animals not submitted to congestion with the elastic band. On the other hand, the formation of hæmolysins did not appear to be affected. According to the researches of Dr. Y. Shimodaira, however, the effect of passive congestion cannot be expressed in the augmentation of any particular kind of the multiple substances by which the organism reacts to infection, but is the result of the increased phagocytosis and augmentation of the bactericidal and antitoxic properties of the stasic fluids. This complexity explains, he thinks, the fact that in apparently identical conditions passive congestion is found in one case to be effectual, and in another quite ineffective.

DR. H. CONRADI, Director of the Bacteriological Institute at Neunkirchen, advocates the Sterilisation of Surgical Instruments, especially those of complex construction, in hot oil. He contends that the usual method of plunging them in boiling water containing 1 per cent. of carbonate of soda is not sufficient to ensure their complete sterilisation, as the spores of certain bacilli easily resist the action of boiling water. He recommends for this purpose the oil of sesame. The sterilising apparatus should be filled with this oil, and the instruments to be disinfected placed in it. Heat is then applied, and in the course of a few minutes a temperature of 200° C. or more is attained, which is sufficient to destroy all known varieties of spores. The steriliser can then be placed in a vessel of cold water, and the instruments in this way are quickly cooled so as to be ready for use. He points out that the sesame oil does not make the hands slippery, but supple, and offers therefore an additional advantage. As the boiling-point of this oil is between 310° and 325°, very little is lost in heating, and the same quantity can be used repeatedly. Moreover, this method of sterilisation is applicable not only to metallic instruments, but also to sounds, bougies, and catheters.

A DISCUSSION took place at a meeting of the Berlin Medical Society on the Serumtherapy for Diphtheria. Dr. Fritz Meyer advocated the administration of large doses of the serum as early as possible in the course of the disease, basing his views on experiments with animals, in which it was clearly shown that the serum if injected in sufficiently large doses is able to save the animals even when subjected to doses of the toxin many times mortal. The injections should be made either intramuscularly or intravenously, and for this purpose the serum should not be carbolicised. The serum is of no use for conditions of cardiac weakness. For this purpose resort should be made to adrenalin. It was generally admitted that for ordinary cases intramuscular injections of serum suffice, but that in severe cases the intravenous method should be used, in order to secure an immediate effect without loss of time. Subcutaneous injections should be altogether abandoned, as it has been shown that it takes two or three days after such an injection before the antitoxin reaches its maximum strength in the blood. Consequently a serious loss of valuable time is involved. According to Dr. Morgenroth this loss of time can be reduced to an eighth by intramuscular injection.

THE following case of acute cerebrospinal meningitis in which the most active and energetic measures led to a successful issue is reported in *Le Progrès Médical* by Adjutant-Major Dr. S. Heyraud of the 6th Infantry Regiment at Saintes. The patient, a soldier, was received into hospital on the night of April 19th, 1909, with a temperature of 39.9° C. He became much worse during the night, and the doctor was sent for early the following morning. He was then found to be unconscious, with the head drawn back, the back arched, and the legs flexed. He was very agitated and restless, and the patella reflexes absent. The bladder was distended and micturition suspended. A diagnosis of meningitis was made and lumbar puncture performed. Thirty to 40 c.c. of purulent liquid were withdrawn and sent to the laboratory for examination. Immediately 15 c.c. of anti-meningococcal serum were injected intraspinally, and 25 c.c. subcutaneously; 2.5 c.c. of electrargol were also injected intravenously and 7.5 c.c. subcutaneously. A further subcutaneous injection of 10 c.c. of electrargol was made in the evening. Baths at 40° C. were given every three or four hours. The patient remained unconscious throughout the day, and the bladder was evacuated by catheter. The following day consciousness gradually returned. Lumbar puncture again gave 40 c.c. of purulent fluid. A further intraspinal injection of 20 c.c. of serum, and intravenous and subcutaneous injections of electrargol formed the second day's treatment, together with an injection of .05 c.c. of spartein sulphate. Marked ameliora-

tion was shown the next day, and lumbar puncture gave 5 c.c. of almost clear fluid. The injections of electrargol and spartein and the baths were continued. Under this treatment the condition of the patient steadily improved, and on the eleventh day the temperature fell to normal, and the patient rapidly became convalescent. Examination of the spinal fluid showed the presence of Weichselbaum's meningococci in large quantities. Inasmuch as the case was evidently of the fulminating type, Dr. Heyraud seems fully justified in the opinion that the recovery of his patient was entirely due to the energetic treatment he pursued.

THE perplexing condition known as "essential" hæmaturia, nephralgia, and other synonyms, is considered in two papers by Schwyzer and Pilcher in the *Annals of Surgery*. The former reports five cases in which an exploratory nephrotomy, done for renal hæmorrhage and pain, revealed no macroscopic evidence of disease, and was followed by complete cure of the symptoms: the cases have all been followed for periods of time ranging from four and a half years upwards, and there is therefore ample reason to regard the cures as permanent. This author emphasises the importance of taking every means of establishing the diagnosis—or rather of excluding every gross lesion: he also notes especially the great frequency with which trauma plays a part in the ætiology. The microscopic picture of portions removed for examination may show signs of severe kidney irritation, or nothing but blood. Renal colic, he says, with the most disquieting microscopic appearance of the sediment in the urine of one side can, after operation, disappear completely—the colic never to return, the urine to remain ideally cleared up. It is also of importance to exclude the possibility of the hæmorrhagic diathesis before suggesting operative measures on any patient suffering from renal hæmorrhage.

PILCHER, on the other hand, lays stress on the painless nature of "essential" hæmaturia and its dissociation from traumatic influences. He describes the condition as nearly always unilateral, and reports two cases of his own in which the lesion found was merely a varix of the veins of the kidney. He ascribes the cure which follows exploratory nephrotomy in these cases to the section of the veins affected: the operation is said to accomplish exactly what that of multiple ligature does in the treatment of varicosities in other portions of the body. Six of the main collecting venous radicles of the kidney are severed and permanently closed, and the course of the blood-stream is instantly changed to the anastomoses at the upper and lower poles of the kidney. He is sure that this angiomatous condition of the papillæ renales is a distinct pathological entity, resembling varicocele, hæmorrhoids, and varicose veins of the leg; and, further, that many of the cases of essential hæmaturia are instances thereof. Nephrotomy is the operation of choice, though decapsulation and fixation cure some cases. Nephrectomy is indicated

only when a rapid and bloodless operation is essential, or when nephrotomy has failed to cure.

DR. LEONARD WILLIAMS, whose criticisms of the adenoid hypothesis of Nocturnal Enuresis and advocacy of Thyroid Medication for this complaint were referred to in the issue of May 15, p. 174, expands his views on comparative hypothyrea in the *British Journal of Children's Diseases*. Not only does Dr. Williams not believe that adenoids have anything to do with enuresis, but he does not even admit that they play a causal part in the production of the arched palate and other ingredients of the adenoid facies. He attributes these deformities to disordered calcification of the bones due to insufficient development and activity of the thyroid gland, and quotes expert laryngologists in support of his argument that removal of adenoids often fails to benefit palatal and dental irregularities. The patients exhibit also, in a majority of cases, a persistently subnormal temperature, and have often cold extremities, and fingers that "go dead." This symptom also is attributed to relative athyrea, for it disappears, together with the nocturnal enuresis, when thyroid extract is administered. It is also emphasised that the children are nearly always undersized, and weigh considerably less than the average for their age; this also is remedied very rapidly under treatment. The author concludes with some remarks on the signs of intolerance and overdosage by thyroid extract. The most constant is nasal catarrh, which appears very constantly, and long before tachycardia is noticeable. Another sign is the rising temperature and intolerance of heat on the part of the patient. As long as there is gain in weight the remedy is doing good, but as soon as there is a definite fall the drug should be immediately suspended. Dr. Williams' theories will no doubt be thoroughly tested by independent observers, and if his conclusions should be confirmed a notable advance in organo-therapy will certainly have been made.

ANOTHER aspect of Thyroid Insufficiency is dealt with in the *Bristol Medico-Chirurgical Journal* by Dr. D. A. Alexander, who reports the puerperal history of a woman who had been cured of myxœdema by thyroid extract. The patient was a normal child up to the age of about ten years, when she developed signs of thyroid insufficiency which were never properly treated until four years later. She was then taken in hand by Dr. Byrom Bramwell, and under thyroid medication did well. She still occasionally took the extract whenever dryness of the skin warned her of the possibility of relapse, and at twenty she married. Her first three pregnancies terminated successfully; and the fourth promised to do the same, for the urine was normal, emesis not excessive, and the general condition so good that no thyroid extract was taken. At the beginning of labour there was a profuse accidental hæmorrhage, but otherwise labour was easy. During the first week of the puerperium the patient expressed a desire for thyroid treatment, and the temperature oscillated about one degree per day. On the eighth night delirium was reported, and on the ninth a rigor with a temperature of 105° F.

Jaundice, thrombosis, and metastatic abscesses rapidly developed, and on the fourteenth day she died; autopsy was refused. It is suggested as a possible explanation of the case that during pregnancy the foetal thyroid may compensate the mother for the inactivity of her own. Halsted proved that in pregnant bitches the thyroid can be almost exterminated without causing myxœdema. And it might conceivably follow that if such had happened in this case, acute symptoms of myxœdema might ensue on the completion of pregnancy. There was, however, no thyroid enlargement palpable in the infant, and the account given of the course of the case suggests a septic rather than a myxœdemic origin for the fatal complications which ensued.

ACUTE Pulmonary Œdema is recognised as an occasional complication of pregnancy. It may occur during labour, but is more frequently observed at the time of delivery, while occasionally it arises during the puerperium. Bonnet-Laborderie has recently attempted to solve the problem of its pathology. Huchard attributes it to the effect on the cardio-pulmonary plexus of a condition of aortitis, or peri-aortitis, but Pouliot has negatived this, at least as regards obstetrics. Clinical evidence has so far failed to trace it to hyperactivity of the suprarenal bodies, despite the fact that injections of adrenalin have produced the condition in rabbits. Most authorities agree that cardiac and renal affections are common antecedents, but cases also occur in which no organic lesions are found. The author believes that cases of this sort are the result of the increased blood-pressure which undoubtedly occurs during pregnancy, and is manifested equally in the lungs and in the rest of the body. The expulsive efforts of labour still further increase this pressure, and may end in acute dilatation of the heart. Moreover, evacuation of the uterus fails to relieve this hypertension.

THE investigation of the micro-organisms most commonly concerned in secondary infections in Pulmonary Tuberculosis, a subject in which much interest is now being shown, is dealt with in the second annual report of the King Edward VII. Sanatorium, Midhurst. Twenty-three patients in all were examined. Of streptococci forty-two strains were obtained, very few of them either giving the typical reactions of streptococcus pyogenes, or belonging to the *S. faecalis* group. The majority of the staphylococci isolated were *S. albus*, there being only one specimen each of the aureus and citreus form. Three Gram-positive tetrads of organisms were isolated, and also a bacillus closely resembling the bacillus influenza. It is stated that only four varieties of bacilli were found. Three of the patients are under treatment with mixed vaccines of the various organisms, the opsonic index to one of the organisms being used as a guide in the determination of the correct time to administer the vaccine, and of the amount of the dose. After a course of this treatment tuberculin is then tried. The patients treated in this way have been advanced cases and all pyrexial. It has not been considered advisable to draw conclusions owing to as yet insufficient experience.

SHOULD experience prove that it is as efficacious as it is said to be, the formaldehyde-sheet method of disinfecting rooms should prove a boon both to medical men and to parents, because it is so simple. It appears that many reputed formalin methods fail because the formaldehyde becomes polymerised as it is given off. This polymerisation is largely prevented, however, when phenol vapour is mixed with that of formalin. The following mixture is easily made: Formaldehyde solution (40 per cent), 3 parts; Phenol, 1 part. Of this mixture, about 8 oz. suffice for every 1,000 cub. feet of room volume. A sheet is moistened with the disinfectant and hung up in the room; an ordinary sheet will take about 4 oz. of the liquid, so that several will doubtless be required. The room is then left closed for at least two hours.

ACUTE Deficiency of Suprarenal Action in Infective Maladies is a condition that is being discussed a good deal in France just now, particularly by Dr. Emile Sergent. There may or may not be truth in his views; at any rate they are new, and well worthy of consideration. We know how cloudy swelling and even fatty degeneration may occur in all sorts of organs in severe infective maladies, such as diphtheria, typhoid fever, scarlatina, and so on. The results of such changes in the heart muscle are familiar; but there are not many who have even thought what may be the effects of similar changes in the cells of the suprarenal capsules. Dr. Sergent says that acute changes in the latter are responsible for at least a part of the general depression, asthenia, arterial hypotension, and hypothermia that may ensue after many of the infective diseases. Without necessarily agreeing with him, there seems to be no reason against a trial of suprarenal extract in these cases, not only when the symptoms have actually arisen, but even earlier in severe cases.

INSUSCEPTIBILITY to Vaccination is a subject upon which there are wide differences of opinion, some observers allowing it to be not uncommon, others almost denying its existence. That the ineffectiveness of vaccination in certain children depends more upon the lymph used or upon the vaccinator than upon any innate insusceptibility on the part of the child is strongly brought out by Dr. Leslie Thorne Thorne's report upon vaccination in the Medical Officer's supplement to the thirty-seventh annual report of the Local Government Board. The Animal Vaccine Establishment ceased its work in 1908, public vaccination with glycerinated calf lymph having rendered its continuance unnecessary. The establishment in question came into being in 1881, and a case of "insusceptibility" was never experienced at it by the different operators who had worked there during its existence of twenty-seven years, although 125,566 consecutive primary vaccinations were performed in that time. It seems clear that "insusceptibility" in the legal sense, that is to say, failure to vaccinate a child after three attempts, must in actual practice be an extremely rare event when vaccination is performed properly with reliable lymph.

HOSPITAL CLINICS.

THE DIAGNOSIS OF DISEASES OF THE RECTUM AND ANUS.

By P. LOCKHART MUMMERY, F.R.C.S., Senior Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum; and to the Queen's Hospital.

(A Lecture delivered at the Polyclinic, June 14, 1909.)

GENTLEMEN,—The subject of my lecture is the Diagnosis of Diseases of the Rectum and Anus; and I propose to proceed from the point of view of how one ought to tackle a case presenting itself with doubtful disease of that part.

The first point is the absolute necessity of making an examination. It is scarcely believable, but I assure you many people diagnose diseases of the rectum and anus simply from the symptoms. The reason is fairly obvious. The patient is apt to walk into your consulting room, saying, "I have got piles, I wish you would give me some ointment for them"; and he does not want to take his trousers down; and in the case of a lady she does not want to undress so that there can be an examination. And it must be said that in some cases the doctor is too careless to make an examination. To treat any case of doubtful disease of the rectum without making an examination is iniquitous, because it often results in most grave conditions having been missed.

I have frequently seen cases in hospital, with a note from the doctor saying "I have been treating this case for some months for piles, but it does not seem to be getting better." I examine, and perhaps find a carcinoma, and inquiry shows that the doctor has not even troubled to put his finger inside the rectum; if he had done so he could not have missed such an obvious condition. And in many cases the patient has had to have colotomy performed, whereas if the disease had been detected when the doctor first saw the case excision of the cancer might have been possible. It is wrong to treat any case, however apparently trivial, without making an examination of the rectum.

The value of symptoms in diseases of the rectum is practically negligible. My experience is that if you try to diagnose diseases of the rectum by symptoms you will be wrong in 50 per cent. of the cases. The patient with fissure will detail the symptoms of carcinoma, and the patient with carcinoma will complain of symptoms which seem to point to fissure, or of mere pruritus.

It is advisable to ask the patient questions, and I always start by making notes concerning the history, because by so doing you give the patient some confidence. It is a mistake when your patient comes into the consulting room to put him at once on the sofa and commence to examine his rectum. Moreover, by talking to him for a few minutes you can get a good idea of what sort of person you are dealing with. It is very desirable to get this confidence before proceeding to the examination. The difficulty is to get to know what it is exactly that the patient complains of; patients often wander off into all sorts of side remarks which have nothing to do with the matter. I ask whether it is pain, and if so, whether it keeps them awake at night, or whether it comes on after

the bowels have acted. Or is it bleeding, and if so, how much? The best thing is to get them to compare it with something that they know. One patient with a quite trivial lesion will complain of pain which another would not bother about; a healthy man with the same condition would say there is nothing to bother about, though examination will show he has considerable disease. Ask whether the pain interferes with the patient's ordinary vocation; whether it is worst on standing, or on lying down; whether it keeps him awake at night, or makes him perspire. The neurotic woman will often complain of pain when she is not suffering any at all.

With regard to the method of examination, the first important point is the position of the patient. There are two positions in which to examine patients with rectal disease. The first, and the more universally used, is the left "Sims" position; that is to say, the position on the left side. This is far the better, because it enables you to use the right hand. Ask the patient to lie on the couch, on the left side, draw the knees well up, and put the left elbow under the chest. If the patient is a lady, wearing a big hat, I put a couple of pillows under the head, and let the hat hang over the edge of them, out of the way. The other position is what is called the "knee-elbow" position. The knees should be separated, and the patient should rest on the knees and elbows; the important thing in this posture is to get the thighs square to the couch. It has its disadvantages; it is not a nice position to ask ladies to assume, and if you have to do an operation, it is an uncomfortable position for the patient to occupy for more than a few minutes. In most circumstances the left Sims position is to be preferred.

A good light is essential, and by far the best method is to use artificial light, by means of an electric forehead lamp, with a 4-volt Osram lamp, worked from a little battery or from a rheostat on the wall. If you always use the same light, you get accustomed to the colours presented. And you can throw this light down a speculum or other narrow cavity better than you can daylight, even when that is good. Vaseline is the best material to use as a lubricant, but there are certain cases in which its use is not advisable, such as pruritus, or external piles, where you may want to paint it with some lotion, or where you want to use cocaine, or clean it for an operation. Vaseline is of no use then, as you will waste ten minutes in getting it off. For those cases I do not think anything is better than ordinary ether soap, and if you want to wash this off, you can do it with a little cotton wool and water.

First, look at the appearance of the parts, because the appearance of the parts outside will often give you a very useful guide as to what is likely to be seen. Examine the skin round the anus for fissures, cracks, and eczema, or for the results of

pruritus; in the latter case the skin looks like wet washleather, and slightly moist. One also looks for alterations of contour. Then one separates the anus somewhat to see if there are fissures or piles. A fissure can generally be seen by carefully separating the walls of the anus.

Digital examination requires doing carefully, and some experience of making a digital examination is valuable; because, in the first place, a person who has not had experience of examination of the rectum will not always recognise the lesion when he puts his finger into the rectum; and secondly, you want to make the examination without hurting the patient. I often have men up at St. Mark's to make rectal examinations. Frequently one will see a patient, who has not made any complaint when the house-surgeon or I have made an examination, when the visiting doctor puts his finger into the rectum, nearly jumping off the couch in agony. But, except in the case of fissure, this examination can be made satisfactorily without in the least hurting the patient.

First, be sure to have the finger well lubricated, and, needless to say, the nails should be cut quite short. Then introduce the finger quite slowly. Put the flat of your finger on the edge of the anus, then tip it up slowly, keeping up a steady pressure. Again, never move your finger quickly in the anus, and do not screw it round, except very slowly; sudden movements cause the sphincter to contract violently, and not only hurt the patient, but prevent your getting your finger in. A mistake often made by those who are not used to this sort of thing is that they will often feel too high up for the disease. The majority of lesions in the rectum which one wants to feel are quite low down, within three-quarters of an inch of the orifice. Piles you cannot feel, because they are not feelable.

One next puts the thumb on the outside, and feels for indurated patches between one's fingers. In this way one feels for ischio-rectal abscess. Then pass the finger into the anus, and feel for growth high up. One can use indiarubber cots, but I only do so where there are fistulæ, carcinoma, or reason to suspect syphilitic disease. And if a patient has purulent proctitis one does not want to put one's fingers into the pus. These cots spoil the sense of touch to some extent.

With regard to probes and bougies, probes are not required. A probe will only pass along a straight channel, and the skilled finger can appreciate a fistula under the skin better than it can be appreciated by a probe. Moreover, the passage of a probe along a fistula is painful. A probe is not necessary in fistula until one comes to the operation. Bougies and things of that sort, which were much used some time ago when examining for strictures in cases of doubtful carcinoma and fibrous stricture, are now entirely replaced by the sigmoidoscope; they will not give anything like the same information as will this instrument. With regard to specula, three-fourths of them are absolutely useless.

There are two desiderata about a speculum (1) to be able to see the parts properly, and (2) to use it without hurting the patient. One surgeon in

London who does this sort of work says no speculum should be used in the rectum without giving the patient an anæsthetic. That may have been true six or seven years ago, but it is not true now, because some of the modern speculæ can be used, with care, quite easily on the most nervous patient without hurting him, except in certain cases where there is a fissure or in tubercular ulceration, where there is very great pain. The worst kind of speculum is the so-called bi-valve, which is really a diabolical form. You must pass it with the edge against the lesion which you want to see, and you push the edge of the speculum against the sore place, and when you open the speculum you will tear the sore place open, and the average patient will scream. The withdrawal of the speculum is frequently very difficult, because the mucous membrane will prolapse; I have known of one case in which an anæsthetic had to be given for the withdrawal of the speculum. Any form of bi-valve speculum should be done away with. Another form of speculum is the fenestrated—that is to say, with a gap in the side. The ordinary form is a hollow, with a piece cut out on one side; mucous membrane will prolapse into the instrument, and the withdrawal of it will usually cause very great pain.

The speculum I show you has got very broad edges and a sloping end, and it is short and slightly conical, so that one can see easily. If it is well lubricated, and passed slowly, it can be used on anybody, even in cases of fissure. The only part which has got to pass the lesion is a narrow bit at the extreme end, and that is smooth, and does not hurt. If you want to examine all round an anus, there is a temptation to turn the instrument, but you should avoid that: take the instrument out and replace it where you want it. It is very useful for examining such things as fissure, openings into fistulæ, ulcerations, etc., which occur in the first three-quarters of an inch from the anus.

Remember, you cannot feel a pile; unless it is thrombosed or congested, the ordinary pile is a loose fold of membrane, though every loose fold of mucous membrane is not a pile. You can only see piles, and you must get the patient to strain down as you remove your finger, and then you can sometimes get a pile to come down on to your finger. It is better to see the pile *in situ*, and for that purpose this instrument is the best I know; it is a modification of Kelly's; his was a conical-shaped tube, and had a sharp edge, so you had to be careful never to push it in, or you cut the mucous membrane. This has a very broad edge, and parallel sides. With it one can easily see piles, and examine for proctitis, and though it is not comfortable, it does not hurt the patient if it is passed carefully. After smearing the whole thing all over with vaseline, I hold the handle of the obturator against my fingers, and press it gently against the sphincter, telling the patient in the meanwhile to relax the sphincter as much as possible. Usually it will slip in easily, and when once it is in you can remove the obturator.

If you examine a man, especially an elderly man, who may have an enlarged prostate, it is important

to keep the point backwards, because otherwise the end will impinge against the prostate as it goes in, and will cause discomfort. You can look through it and see what the condition of the mucous membrane is. Then you can withdraw it, and push it back again, and that will bring another portion of mucous membrane into view. Those two specula are sufficient to examine any cases of rectal disease not higher up than two or three inches.

With these two instruments one can examine any lesion two inches from the anus. For carcinoma, ulcerative colitis, or disease in the sigmoid flexure, one needs to use the sigmoidoscope, which is of extraordinary value in these cases. There are many cases of rectal disease which should be examined with the sigmoidoscope, in addition to specula, because even if a patient has piles, it is important to find out whether there is also a lesion higher up. In a case of pruritus, it is necessary to find out whether he has had proctitis. It should be realised that sigmoidoscopic examination can be made without an anæsthetic; I commonly so use it, and do not cause any more discomfort than with a speculum. The patient has no idea what length instrument is being passed. The only sensitive part of the bowel is the last three-quarters of an inch; higher up, the bowel is insensitive, so long as you do not stretch the mesentery, which can be avoided by passing the instrument carefully. This instrument requires some practice in using; otherwise you will not be able to pass it, and know what you are looking at; and also because you can do damage with it unless you are careful. It has an obturator. One greases the whole thing, and passes it with the obturator in place. The object of the obturator is simply to pass it through the sphincter; the obturator should then be removed, and should not be put back again. The electric light is then passed into the instrument, and the inflator attached. After that, the instrument is passed entirely by sight; the rectum is opened out in front of it by puffs of air. I advise people not to push it past a fold, but to blow the fold out of the way. After some experience you can use the end of the instrument to help you to get round a fold.

In ulcerative colitis no one should attempt to use the instrument unless he is very experienced, because the bowel wall is very rotten, and roughness may result in perforation. I have passed it in cases where the bowel wall has been so thin that I could see the coils of bowel through the wall, but no injury has resulted. To work this instrument, I at first used to have big batteries, but now I use this small accumulator, which has no liquid acid to run out. There is no rheostat on it; it is four-volts, and will light the lamp for seven or eight hours. The secret of it is using Osram lamps, which remain quite cold. I show you also an irrigating sigmoidoscope; also one with a much larger bore, so as to pass instruments down it. But that must only be passed with an anæsthetic. As an alternative to a battery, there is a rheostat, an American instrument, with graphite resistance. This cuts down a circuit of 240 volts to work a 4-volt Osram lamp, and it is very satisfactory.

The sigmoidoscope is of such value that everyone should be accustomed to using it who deals

with diseases of the bowel. I had a patient from the Midlands the other day who had been treated for fifteen months for colitis. He was forty-one years of age, and had had occasional diarrhoea. He passed some mucus at times, but had never seen blood. If he ate too much or stood a long time he had a colicky pain in the abdomen. I found the rectum and lower part of the sigmoid flexure normal. Then on passing the sigmoidoscope to its full length I found a cancerous ulcer about the size of half a crown in the centre of the sigmoid flexure, which accounted for his symptoms. Though the abdomen was easy to examine, I could detect nothing in that way; and without this instrument it would have been quite impossible to diagnose that growth for another four or five months, by which time it would probably have been inoperable. It is now excellent for excision and anastomosis.

Examination of the abdomen must be done in any case. If there are piles, the patient may have cirrhosis of the liver, or some other condition to which piles are secondary, and you must not treat the piles if there is some cause in the abdomen causing them. Whatever the condition of the rectum may be, it is always advisable to pass the finger into the rectum and examine as high as possible; otherwise you may fall into error, and miss carcinoma higher up.

I have brought for your inspection models to illustrate the more common conditions of the anus. Let us take them from the standpoint of symptoms.

The most common condition which results in pain is fissure. The diagnosis is fairly easy. By passing the finger into the anus you will feel the hard indurated walls. Another cause of pain is strangulated piles. There is swollen mucous membrane at the edge, and partial obstruction of the blood supply, due to nipping of the piles by the sphincter.

Another cause of pain is external piles; they look like purple grapes at the edge of the anus; they are tender and fairly hard. The exact appearance will depend on the stage at which they are seen; sometimes their surface will have become ulcerated and gangrenous. In pruritus, with eczema, there is a whitish appearance of the surrounding skin, with deep excoriated fissures and reddish eczema round the edges; this is a very characteristic result of pruritus.

Sometimes part of the bowel prolapses, and it comes down as a painful red blob, and is occasionally mistaken for piles. It is very important to have some idea of what secondary syphilis of the anus looks like; as it is not advisable to put one's finger on to condylomata, you must examine those with the finger stall. Sometimes they are very deceptive, and one can examine them digitally without knowing what they are. If that is so, the hand should be thoroughly sterilised afterwards.

Epithelioma is well illustrated by this model: an indurated ulcer spreading on to the skin. Tuberculous ulceration is a very characteristic condition; there is a shallow, callous-looking ulcer, with undermined blueish edges, and spreading out in different places of the anus, very often at the same time.

A much rarer form is the lupoid condition shown by this model. The first time I saw it I mistook it for early epithelioma.

SPECIAL ARTICLE.

IMMUNISATION: A CRITICISM OF CURRENT THEORY AND PRACTICE.

(FROM A CORRESPONDENT.)

THE disappointing results of vaccine treatment in tuberculosis and other infections would seem to necessitate a reconsideration of the claims put forward on its behalf, and of the mode in which its activities have been supposed to be exercised.

A volume recently published from the pen of Dr. E. C. Hort, entitled "Rational Immunisation in Tuberculosis," contains valuable criticisms on the subject, and views on immunisation, derived from personal investigations, which are worthy of the most serious attention. Dr. Hort does not hesitate to maintain that the current vaccine treatment of all kinds of infections, except relatively unimportant ones, is a failure, and that such failure is inevitable in all serious affections accompanied by extensive tissue changes.

Up to the present the vaccinists and opsonists appear to have assumed that a specific disease is due to its specific organism alone, and that cellular antagonism may be practically ignored. Yet it is fairly obvious, at least to the present writer, that bacterial vaccines can induce bacterio-tropic response, and nothing more.

Vaccine therapy entirely ignores the necessity for exciting cellulo-tropic response. This is surely a limited view of the production of immunity. A wider conception is that, in order to create or restore immunity to the body as a whole, whatever the infection, the reaction of the tissue cells to intrinsic stimuli must be aroused, as well as to the extrinsic ones exerted by bacteria and toxins. These intrinsic stimuli to cell-reaction include, among others, the intra-cellular enzymes, some of which are autolytic, and the products of their morbid activity.

Under certain circumstances these enzymes and their products are highly toxic and even autotoxic. Such an admission leads to a generalisation of enormous consequence. Usually it is assumed that the toxæmia of infective disease proceeds only from the invading organism. This cannot be admitted as the only cause, for there is evidence to show that the toxic symptoms may proceed as much from the tissue cell derivatives as from the bacterial ones. Indeed, it is more than possible that cellular changes often precede infection, and thus explain the, at present, inexplicable conversion of non-pathogenic organisms into an active state of pathogenicity. The pneumo-coccus, the organisms of infectious coryza, and the colon bacillus are common instances of this change. The wide distribution of the tubercle bacillus and the frequency with which healed tuberculous lesions are found after death bring this organism into the same category.

It is probable that few individuals escape infection at some period of life, but by making use of a process of spontaneous auto-inoculation recovery ensues. The cellulo-tropic

restraint is sufficient protection in the vast majority of infections. Measures for the prevention of tuberculosis must be directed to raising this resistance, as well as reducing the chances of infection. Tuberculin administration, whether by mouth or subcutaneously, is necessarily of very limited value, and is frequently most disappointing. It makes no provision for immunising the lung against itself.

Most practitioners have found instances in which tuberculin administration is ignored absolutely by the economy, whether for good or evil, even in cases where the disease is active. This is not surprising, for no amount of tuberculo-opsonin or other purely antibacterial substance can enable already damaged cells to recover.

It is the firm conviction of the present writer that if the cells are not irretrievably damaged, recovery can be effected by inciting intracellular restraint, and by this method alone. No doubt immunising the cells against the bacillus and its toxins may prevent further infection and progressive damage, but it does not affect the damage already done. Even if it is assumed that the tubercle bacillus is entirely responsible for the tissue changes of tuberculosis, anti-tuberculous bodies can only act indirectly in enabling the infected lungs to recover from the infection.

Though in certain infections, notably mild staphylococcal ones of the skin, bacterial vaccine therapy has a definite value, there is much too great a tendency to expect more from the method than is reasonably possible.

If vaccines were made from cellular emulsions, it seems at least possible that the present fatal objections raised against bacterial injections on a large scale would be met, on the assumption that such emulsions would undoubtedly have a cellulo-tropic restraint.

Such a procedure is unnecessary, for much better results have been obtained by the methods of auto-inoculation, the infected cells and the infecting organisms being used as natural vaccines, thus exciting a double response. This method has been carried out with great success in apyrexial tuberculosis by Paterson's method of graduated labour; and by Hort in pyrexial cases, by induction of artificial hyperæmia of the lungs.

Nature cures infection by converting both cells and bacteria into auto-inoculating agents, and thus exerting both cellular and bacterial restraint. To confine attention to the bacterial and ignore the cellular aspect leads to failure, or at best to a most partial success in treatment.

These considerations deserve the most serious attention of vaccinists, opsonists, and medical practitioners. It is perhaps not too much for the present author to expect that they will lead to the vaccine therapeutists becoming a little more modest in their views.

MEDICINE.

ASCITES—V.

THE DIFFERENTIAL DIAGNOSIS OF THE CAUSE OF ASCITES.

GENERAL CONSIDERATIONS.

If ascites is the only fluid accumulation in the case, or if there is swelling and œdema of the feet as well, but the ascites appeared first; or if the ascites is out of proportion to the degree of dropsy elsewhere, it is most probably due either to one of the affections of the peritoneum itself, a blood disease, or else to one of the causes of portal vein obstruction.

If it is associated with general anasarca, such as œdema of the legs, body, and face, and with effusion into the pleura or pericardium, the most likely cause is Bright's disease.

If swelling or œdema of the legs and lower part of the body were the first symptoms to be noticed, and ascites followed, then chronic valvular or muscular disease of the heart, chronic lung disease, or obstruction of the inferior vena cava above, or involving the hepatic veins, would be likely. It should be remembered, however, that there are exceptions to this general rule, for ascites does not attract notice from the patient as readily as does œdema of the ankles and legs; and in some cases of cirrhosis of the liver, œdema of the legs may be complained of some time before the definite onset of ascites.

If jaundice is associated with ascites, it points to some form of portal obstruction in the liver itself or in the portal fissure. If the jaundice is intense, there is probably a serious lesion either in the glands in the portal fissure in the common bile duct, or in the head of the pancreas, thence involving the bile duct.

If the liver is enlarged, the ascites will probably be due to one of the following conditions:—

(a) Secondary carcinoma; (b) cirrhosis of the liver; (c) peri-hepatitis; (d) syphilis of the liver; (e) passive congestion and nutmeg change from chronic heart or lung disease with failing cardiac compensation.

If ascites is associated with the presence of multiple intra-abdominal tumours, either tuberculous or malignant peritonitis is probable.

It will now be well to say a few brief words as to the differential diagnosis of each of the various causes of ascites.

I. DISEASES OF THE PERITONEUM.

(a) *Simple Acute Peritonitis*.—By simple acute peritonitis is meant an acute inflammation of the peritoneum, which is followed by exudation of serous non-purulent fluid, and which is apparently due to no perforation of a viscus, or to any other definite local primary focus of disease. It is analogous to acute pleurisy with effusion, but is much rarer. It usually occurs as a complication of Bright's disease.

The onset as a rule is sudden with acute abdo-

minal pain and vomiting. The abdomen soon becomes distended, and its walls are tender and rigid. The signs of free fluid in the peritoneal cavity are present. The pulse is rapid, and the temperature more or less raised. It may be mistaken for acute peritonitis, due to perforation of a gastric or duodenal ulcer, and the like, and laparotomy may consequently be performed. Recovery without operation is possible, but, as a rule, its association with extensive Bright's disease indicates that the end is near.

The acute onset and the coexistence of Bright's disease, with its typical urinary changes, are the most important diagnostic points. It cannot be too much emphasised that urinary examination should on no account be omitted in all acute abdominal cases.

(b) *Simple Chronic Peritonitis*.—By simple chronic peritonitis is meant a chronic inflammation which is neither tuberculous nor malignant. It may result from repeated tapplings for ascites due to another cause. One sees cases of mitral disease, for example, in which ascites occurs amongst other effects of failing compensation. Paracentesis abdominis becomes necessary. It may be repeated. The heart may thereafter recover perfect compensation, and all the symptoms except ascites disappear. Unless one thinks carefully, one may still attribute this ascites to the mitral disease, when in reality it is no longer due to this, but to the chronic peritonitis resulting from the tapping of ascites, due in the first place to the heart disease. It may also be associated with chronic Bright's disease, alcoholism, or syphilis.

The abdomen is usually distended with fluid, which may be free in the peritoneal cavity and give rise to general abdominal distension, or, on the other hand, may be limited to certain parts by adhesions and cause an enlargement of the abdomen, which is not symmetrical.

If the mesentery is shortened and the intestines are matted together and bound down to the spine, there may be dulness all over the abdomen, or even dulness in front, with some resonance in the flanks, so that ascites from this cause is very liable to be mistaken for ovarian tumour.

In some cases a peritonitic rub may be felt or heard on auscultation over the upper part of the abdomen, and there may be some corresponding tenderness on palpation. The patient may complain of continual dull pain in the abdomen, and there may be occasional vomiting, constipation, or diarrhoea.

The presence of albumen and renal tube casts in the urine may be very helpful in the diagnosis, and in some cases there may be the symptoms and blood counts corresponding with the blood diseases enumerated above, amongst the possible causes of chronic peritonitis and ascites.

ACUTE NON-GONOCOCCAL EPIDIDYMO-ORCHITIS.

THE bacteriology of acute epididymo-orchitis is being elucidated by degrees, but there is still room for much more investigation upon the subject. The commonest cause for the lesion is gonorrhœa, but many cases of acute epididymo-orchitis are due to other causes—mumps or the bacillus typhosus for example.

Time and research lead to the discovery of fresh agents that may attack these parts. Dr. Castellani drew attention to one of these last year, when he described what he calls the "Epidemic Funiculitis" of Ceylon. This is a disease in which the whole of the spermatic cord becomes highly inflamed and infiltrated, its circumference increasing to as much as three or even three and a half inches. The tunica vaginalis of the testicle also becomes congested, but usually without leading to acute hydrocele. The cord, when cut across, exudes thick creamy pus both from the pampiniform plexus of veins and from the vas deferens, though the testicle itself generally remains unaffected.

The usual history is that the patient has come home very tired after a hard day's work; he does not feel unwell, and he bathes as usual; after the bath he suddenly begins to shiver, and the shivering develops into a veritable rigor, with a great rise of temperature. Nausea is marked, and there may be actual vomiting; whilst within a very short time pain is complained of along the spermatic cord and in the epididymis. The condition becomes rapidly worse, and the next day or the day after the case is taken to hospital. The general

condition looks grave, the temperature is 102° F. or 103° F., and locally there is a large and painful inguinal or inguino-scrotal swelling. Unless care be exerted, strangulated hernia may very easily be diagnosed, especially in those cases in which vomiting and hiccup are marked features. The swelling is hard and very tender. It is non-translucent, and it is dull to percussion. It is usually unilateral.

The penis will naturally be examined critically, but no ulcer or sore is to be found, nor any sign of gonorrhœa. The purulent infiltration of the cord is prone to lead to septicæmia and jaundice unless surgical measures are resorted to, but if the spermatic cord is freely incised as high up as possible the lesion can be cured.

Gonococcal trouble being excluded, it has been the opinion of some that the disease is caused by filaria parasites—a sort of local acute suppurative elephantiasis. Castellani has examined cases from this point of view, however, and he has never succeeded in demonstrating the filarial parasites or their embryos.

On the other hand, this observer examined the pus bacterially in five cases, and in all of them he found the same diplo-streptococcus. That this organism may be the actual cause of the acute epididymo-orchitis in these cases is also suggested by the fact that he examined blood from a vein in two of the five cases, and found the same strain of diplo-streptococcus in the circulating blood as was present in the pus in the spermatic cord.

NUTRIENT MEDIA IN THE LOCAL TREATMENT OF ULCERS.

THERE are many ulcers that get well easily enough under the simplest treatment; there are others, on the other hand, that stubbornly resist treatment altogether. It is by no means a new suggestion that such stubborn ulcers should be treated with nutrient media, but it is a line of treatment that is apt to be forgotten by the practitioner. It has a strong advocate in Professor Carter S. Cole in New York.

Anything that will furnish nutrition to tissues will also serve as a culture medium for bacteria, of course, and therefore a good deal of careful supervision is required in its use; but there is no reason why the nutrient application should not be used in conjunction with an antiseptic which will obviate the risks of further sepsis. Bed-sores, for instance, are amongst the most difficult of things to cure; they may need to be fomented with boric acid four-hourly to keep them clean, and yet the granulation tissue in their bases is slow in growing. If dry and sterile powdered peptone is sprinkled over the surface of such an ulcer each time it is dressed it is wonderful how much more quickly the granulations will grow than before. A slow, indolent ulcer may be converted into one that is granulating healthily and vigorously in quite a short time.

Amongst the different nutrient media that may be applied to ulcers in this way one composed of

alcohol and water, ether-extracted fat, gelatine and albumen, peptone, creatine and meat extractives, and salts proportionate to those in ordinary tissues, serves well. It is simpler, however, to use either cod liver oil, or powdered peptone, or a combination of these two.

If there is no sepsis that requires treatment by fomentations at the same time, a piece of sterile gauze saturated with the above nutrient solution may be laid over the ulcer; over this a piece of gutta serena tissue or oiled silk extending beyond the edges of the gauze in order to retain heat and prevent contamination, and outside this a piece of dry gauze and a good bandage smoothly applied. This dressing should be changed daily, or certainly at no longer interval than forty-eight hours. When changing the dressing the wound surface and its surroundings are washed clean with dilute alcohol, and the process is then repeated as before. The improvement is almost immediate. The gauze becomes white where it lies in contact with the ulcer, and it is very little changed where it has been in contact with sound skin.

One important point claimed by Professor Cole in favour of nutrient dressings is that after deep burns the repair is so much more rapid that there is far less scarring than there otherwise would almost certainly be.

SURGERY.

A CASE OF ACUTE DILATATION OF THE STOMACH.

ACUTE dilatation of the stomach is an occurrence of great rarity, especially if it appears to be idiopathic; that is to say if the symptoms come on suddenly in an individual who was up to that time in his normal state of health. In the great majority of these cases the dilatation of the stomach is secondary to some other serious disorder. It has been known, for instance, to follow upon operations on the pelvic viscera in females and upon the gall-bladder in both sexes; and cases have been recorded in which it appeared as a complication of ulcerative endocarditis and a subphrenic abscess respectively.

The following notes are those of a case of primary acute dilatation of the stomach which was under the care of the writer. The patient, a French girl aged 25, could only give a vague history of the onset of her trouble. She said that three days before seeking advice she had been seized with diarrhoea, and that next day she had a sudden acute pain all down the left side of the stomach, which had persisted. Since the onset of this pain she had vomited everything she had taken. She had occasionally vomited after her meals in the past, but had never had hæmatemesis nor had she been prone to indigestion. She was a vegetarian.

The only possible indiscretion of diet to which the patient could in any way attribute her symptoms was the taking of some pork gravy just before the attack began. No other member of the household who partook of this dish suffered any inconvenience. When she was first seen she looked ill and was in severe abdominal pain referred to the left half of the abdomen. Her aspect was that of a case of peritonitis, with sunken eyes and an anxious countenance. Her pulse 160 and feeble, and her temperature 96° F.

The upper three-fourths of the abdomen was distended and appeared to be occupied by an enormous oblong mass whose long axis was vertical. There was no movement on respiration in the distended portion of the abdominal wall, and there was distinct resistance on palpation. On percussion, not only was the mass itself resonant, but the liver dullness was completely absent, except for a small area in the right axillary line. A vaginal examination was made, but revealed no abnormality of the pelvic viscera.

An immediate operation was decided upon, a provisional diagnosis of perforated gastric ulcer being made, as everything seemed to point to this rather than to any less usual condition.

The abdomen was accordingly opened through a vertical incision by splitting the fibres of the left rectus abdominis muscle in its upper half. Immediately on opening the peritoneum a portion of a large rounded swelling with distended veins upon its surface came into view. This was resonant on percussion.

The incision was enlarged to admit the hand, and the shape and relations of the swelling carefully palpated. It was then discovered that the tumour

was an enormously distended stomach which was bent upon itself in a U-shaped manner, the most dependent portion resting upon the fundus uteri. The upper pole of the swelling was pushing the liver well up out of reach under the costal arch. A small opening was made into the organ: at first a rush of gas made its escape, and this was followed by a quantity of greenish-yellow fluid, which drained away for a considerable time. The amount of this fluid evacuated was measured and found to exceed six-and-a-half pints.

Under the influence of the anæsthetic the patient showed immediate improvement as soon as the distension of the stomach was relieved. The wound in the stomach was sewn up with Lambert sutures, and the organ was then systematically palpated. No gross abnormality could be discovered; that is to say there was no sign of a recent or old-standing ulcer at the pyloric end and certainly no evidence of pyloric stenosis. The abdominal wound was sewn up in layers, an indiarubber tube being inserted at the lower end as a precautionary measure.

After the operation the patient was allowed nothing to take for some days except tea. She still had pain for 24 hours after the operation, but no vomiting at all. The tube was removed on the third day. There was no evidence that the stomach was dilating again, *i.e.* its percussion note was normal in distribution. On the sixth day the patient was allowed to have milk, and pounded fish on the ninth day. On the tenth day the stitches were removed. The wound healed by first intention. The rest of her convalescence was uneventful.

There were several points of interest about the case. In the first place, should one have been able to arrive at a correct diagnosis? In the writer's opinion the only feature which was unlike a perforated gastric ulcer was that the abdominal distension was sharply limited at its lower level, as if the abdominal wall were pressed out by a localised tumour rather than by the distended intestine in a late stage of peritonitis.

Apart from these considerations the history in this case was most suggestive of a perforated gastric ulcer—the abdominal facies, the resistance of the upper abdomen, and the almost complete absence of liver dullness associated with a quick, feeble pulse, presented a syndrome almost pathognomonic of advanced peritonitis.

Of course, if the diagnosis can be made absolutely certain, it is obviously incorrect treatment to open the abdomen, since acute dilatation of the stomach can be cured by the passage of the stomach tube and keeping the patient in a prone position. But if there be the slightest doubt, the writer's opinion is that the abdomen should be opened without delay. After all, it is a far graver error to allow a case of peritonitis to die with the abdomen unopened than to do an unnecessary laparotomy in such a case as the one under discussion.

THE BEST SPLINTS FOR BOW LEGS.

DR. ARTHUR TODD-WHITE has made public, in the form of a letter to the *Guy's Hospital Gazette*, some very pertinent remarks upon the question of bow-leg splints. He complains that the way of treating bow-legs still in vogue is antiquated, and he thinks it time that it gave place to a more rational method.

Dr. Todd White's own experience began with a boy, a relative, who had bow-legs, and whom he therefore took to an eminent "specialist," in addition to making personal inquiries at various hospitals as to the latest treatment. He found everywhere the same tale: "Put on long splints, and keep him off his feet."

This treatment, he contends, is entirely wrong in principle and does more harm than good. The disadvantages are many, the most important being that the beneficial effects of muscular action are done away with, the circulation in the limbs is interfered with, the splints are easily displaced, and have to be put on afresh very often, which takes time, the child is utterly miserable, the want of exercise is deleterious to its health, and the bandages get dirty.

The proper splints for bow-legs are made of poro-plastic felt, are placed on the inside of the leg, extending from a little above the knee to the ground. They are fastened with three straps, one immedi-

ately below the knees and one round the ankle, over boots if the latter are worn. These two straps are not drawn very tight, and the third one, which goes round the calf and has a square leather pad on its outer side, is tightened every day until the limb is straight.

There is no need whatever, Dr. Todd-White states to have a splint for the thigh, the femur being rarely affected, and the powerful muscles *with exercise* curing any deformity by themselves.

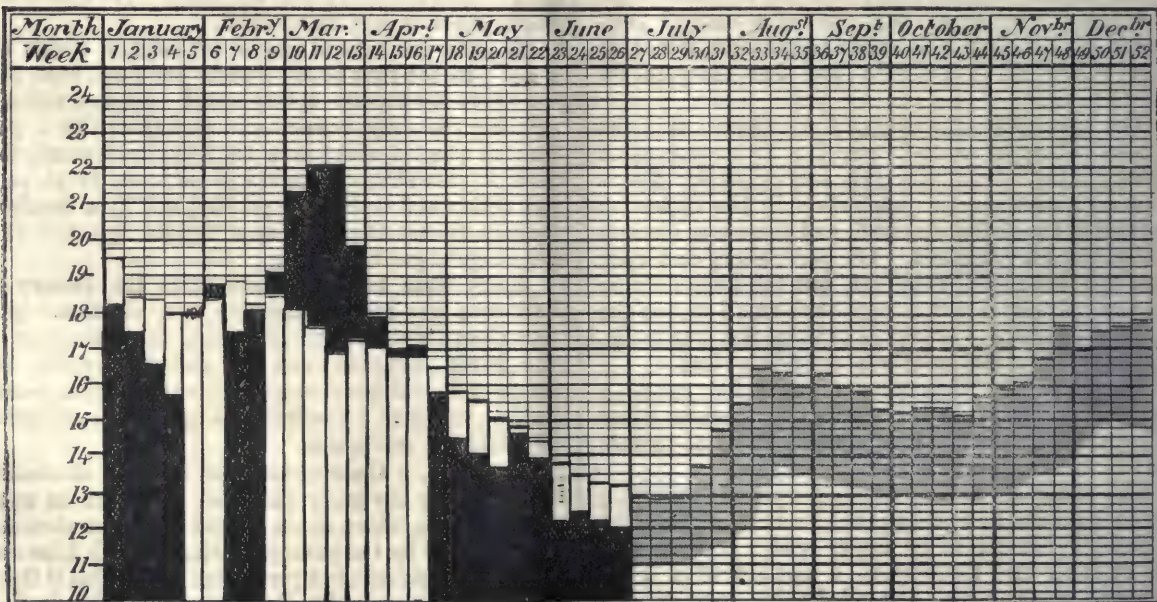
The advantages claimed for these splints are as follows: First, they absolutely cure the bow-legs; Dr. Todd-White after years of experience can guarantee this. Secondly, they permit of the child's running about and developing its muscles, the latter in their turn tending to draw the bones into a normal shape. Thirdly, they are easier to put on than a pair of boots, and therefore can be removed when the child lies down, or when massage is needed, or for sea-bathing. They can be kept clean; covered with brown leather they look like leggings; the children like them, the older ones putting them on themselves.

These splints are not new to the profession, but they have been overlooked. They cost about 15s., and they can be made by any instrument maker. Two pairs will last long enough to effect a cure—namely, about three years.

PUBLIC HEALTH AND HYGIENE.

DIAGRAM OF THE WEEKLY DEATH RATE IN 1909.

Showing the weekly death rate for 1909 according to the Registrar-General and the mean weekly death rate for the last seven years of the 76 great towns of England and Wales.



White columns show mean weekly death rate for last seven years. Black columns show weekly death rate for current year. Where the death rate for 1909 is in excess of the seven yearly mean, the excess is shown in black above the white column which represents the mean. Where the death rate for 1909 is below the seven yearly mean, the black column is shown in its entire length; the white column, which represents the mean, showing above the black. Where the death rate for 1909 coincides with the seven yearly mean, it is shown thus, xx.

DISEASES OF CHILDREN.

PAROXYSMAL SNEEZING AND HAY ASTHMA.

THE occurrence of paroxysmal sneezing in children is not very common. A typical instance was that of a little girl, three years old, who had been subject to attacks since the end of the first year of life. Previous to that she had suffered with facial eczema. The paroxysms would come on in the mornings, on change of temperature, on driving, and at all times of the year. The mother regarded the smell of horses as a definitely exciting cause. From 15 to 20 sneezes were given in rapid succession; the child yawned frequently, and seemed dull and irritable afterwards. A spray of adrenalin solution, 1 in 1,000, was beneficial, but not curative. Subsequently some adenoids and portions of the inferior turbinal bones were removed. At the operation it was found that irritation of the mucosa over these bones induced sneezing; but a month later the attacks were as bad as ever. There was a strong family history of hay fever. A younger child subsequently passed through a severe attack of general eczema, lasting from three to eight months of age, and a month later had true spasmodic asthma. In this case there is no doubt that the affection belongs to the group of asthmatic conditions.

Paroxysmal sneezing is sometimes spoken of as paroxysmal coryza, vaso-motor coryza, or vaso-motor rhinitis. It is essentially the same as hay fever, and due to irritation of the terminal filaments of the nasal nerve; occasionally to the irritation of a spur on a turbinal. Patches of hyperæsthesia of the nasal mucosa may be found on examination, just as in true asthma. A neurotic or gouty ancestry, sometimes combined, is the common hereditary predisposing factor. Exciting causes include innumerable aerial emanations, varying in their effect in different individuals, east winds, and gastro-intestinal troubles, as well as local nasal affections.

Hay fever is sometimes regarded as dependent on an abnormally large antrum of Highmore. Another view of its pathology is that it is primarily conjunctival. Many attacks begin with itchiness of each inner canthus and irritation in the nose. Examination reveals slight hyperæmia of the bulbar conjunctiva, a fan-shaped arrangement of vessels, analogous to pterygium, which is merely an exaggerated condition of the same affection. The eyelid is red and swollen, and lachrymation and photophobia are present. It is quickly followed by sneezing, nasal obstruction, and profuse watery nasal secretion. The whole duration of the attack is about three weeks. Thus it differs from paroxysmal sneezing in its extent, the ocular involvement, and its duration. No doubt there are varieties of these affections, and one passes through intermediate gradations of severity into the other. At one end of the scale is the simple paroxysm of sneezing, such as is induced in normal persons by nasal irritation, and at the other the severe recurrent attacks of hay fever. Possibly in the one instance the mucous membrane of the nose is alone susceptible to the irritant, while in the other the conjunctival is equally, if not more, susceptible.

Treatment necessarily varies somewhat in accordance with the variety of the affection with which we have to deal. If the case is merely one of paroxysmal sneezing, it is obviously advisable to remedy any local condition of the nose or throat, which may possibly act as an exciting cause or interfere with proper breathing. Similarly, it is advisable to use such remedies as will render the nasal mucosa less sensitive to irritation or vaso-motor turgescence. Unfortunately the effects of treatment on these lines passes off quickly. A spray of adrenalin solution is undoubtedly the best immediate remedy. Any local tender or hyperæsthetic spot on the nasal mucosa can be painted with silver nitrate solution, 2 per cent. strength, or touched with the galvano-cautery. Adenoids and enlarged tonsils should be removed and proper respiratory exercises insisted upon. Considerable benefit is also derived from definite training in the exposure to sudden changes in temperature. It is doubtful, however, whether any advantage will be derived by attempting to train the patient to bear exposure to the particular exciting aerial emanation which brings on the paroxysm.

On the assumption that some cases of hay fever are primarily conjunctival in origin, and in the presence of evidence of such irritation at the onset of an attack, the eyes should be protected by means of glasses from exposure to dust. Dunbar's anti-toxin or serum, "pollantin," is instilled in fluid form into the eyes, and as a powder into the nose. Apparently it is occasionally useful. Cocaine sprays ought rarely to be employed, because of the danger of setting up the cocaine habit. The drug sets up local constriction, but patients, who are old enough, get into the habit of inhaling the spray at intervals all day long. The drug is found in some of the advertised asthma cures. A lotion of resorcin grs. ii. to iv., sodium chloride grs. iv., in an ounce of water is a valuable nasal astringent. It may be more efficacious if a couple of minims of acetic acid are added to it. Internal treatment is absolutely valueless in simple paroxysmal sneezing, and not of much use in hay fever. The drugs chiefly recommended are quinine, extract of belladonna, extract of stramonium, and arsenic. It is of importance to attend to the general health and the alimentary tract.

Climatic treatment is of value through avoidance of the particular irritant—*e.g.* high altitudes and sea voyages, if the cause is the pollen of certain grasses. An equable temperature is advantageous when attacks are induced by sudden changes in the temperature of the atmospheric air alone. For intractable cases the resection of the nasal nerve has been suggested. This nerve is widely distributed. It supplies the conjunctiva, integument of the eyelids, lachrymal caruncle and sac, ciliary muscle, cornea, frontal sinus, and the mucosa of the anterior portions of the nose. All the symptoms of severe hay fever are explicable in accordance with the distribution of this nerve, and ought to subside if it is resected. The operation would have to be bilateral, for it is rare for the affection to be unilateral.

DERMATOLOGY.

XANTHOMA DIABETICORUM.

THERE is a rather uncommon, but when seen a very striking, skin eruption that occurs in glycosuric subjects and is known as xanthoma diabeticorum. It seems to have been first particularly described by Malcolm Morris; and although it has relations with xanthoma or xanthelasma due to other causes such as chronic jaundice, it has usually been regarded as sufficiently different to be distinctive. The case we are about to describe suggests that this is not really the case, and that although the eruption in diabetic subjects sometimes presents an appearance that will lead at once to suspicion of glycosuria, there are a certain number of other cases in which, though coinciding with glycosuria, the xanthoma has precisely the same appearance as has ordinary xanthelasma planum.

CHARACTERISTICS OF THE ERUPTION.

The variety which is regarded as typical of diabetic subjects is much rarer than are the forms termed xanthelasma palpebrarum, xanthelasma tuberosum, and xanthelasma planum. Besides the condition of the urine its special features are as follows. The yellow spots are raised in a conical or domed shape and they are surrounded by a pale, dull red zone. They may be mistaken for acne pustules, but on puncture they are found to be solid. They come out first upon the extensor surfaces of the limbs, particularly on the elbows, then on the lower part of the back and abdomen, and on the buttocks. They are also to be found on the genital organs, on the palms of the hands, the face, chin, neck, scalp, and exceptionally on the eyelids.

The only subjective symptom generally observed is itching, which is more marked when the eruption is on the wane than when it is either developing or in full swing. The mucous membrane of the mouth is occasionally affected. The lesions appear rapidly and take weeks to disappear. Fresh crops are produced after some time. The patients are mostly men, apparently in good health, but inclined to stoutness. As regards the constitutional state it may be stated as a general law that there is, has been, or will be sugar in the urine.

AN ILLUSTRATIVE CASE.

In the following case, however, the xanthoma was far less of the acne-resembling form, and more like xanthelasma due to chronic jaundice. The patient was a well-to-do man aged 65. Four or five years previously he had experienced a troublesome balanitis and posthitis for which he had consulted doctors, with the result that glycosuria to the extent of 4.5 per cent. was detected. There were none of the other usual symptoms of diabetes mellitus—no thirst, no polyuria, no wasting. Under observation it was found that the glycosuria was not constant. In the course of time he noticed a skin lesion upon his right leg. He attributed its coming to the fact that he had had obscure pains in the limb, to cure which he had resorted to rubbings and thumpings.

When it had been present a year it had only slowly enlarged. Situated upon the external aspect of the leg some four inches above the malleolus, it was made up of two plaques, an upper and a lower, united to one another by a narrow junction. The general tint of the patches was that of yellow ochre. At the edges the lesion terminated in a series of small flat papules, close to but separated from the main mass. The plaques were very slightly raised, firm, and resistant; the surrounding skin was quite soft and supple. There was no obvious vascular dilatation, but a little local hyperæsthesia and pruritus.

In the upper part of the same leg there was another patch of xanthelasma, less distinct than those below, composed of several scattered smaller patches of typical yellow-ochre colour. Nowhere did the patient exhibit xanthelasma tuberosum. The only other parts of the body upon which the lesion could be found were the palms of the hands and the soles of the feet; here one could see definite lines in the skin of a diffuse sulphur yellow colour, nearly but not quite corresponding with the natural lines or sulci in these parts. The eyelids were unaffected.

It should be noted that, except for the occasional glycosuria and for the xanthoma the patient was, and always had been, perfectly sound. He had never been jaundiced, nor had he suffered from any symptom of gall-stones or any other hepatic disease. The urine contained neither bile pigments nor urobilin. There seems no doubt that he is an instance of xanthoma diabeticorum conforming rather to the xanthoma planum type than to that which has sometimes been regarded as distinctive of diabetes.

PATHOLOGY AND PROGNOSIS.

The skin eruption, whether of the eyelids or of the multiplex or "diabetic" variety, is generally looked upon as an inflammatory neoplastic process. There is an aggregation of cells resembling those met with in atheroma of arteries, which are formed partly from leucocytes, partly from connective tissue corpuscles. Instead of softening and breaking down into pus, these cells undergo a peculiar fatty change, which results in the production of a firm yellow lipochrome or fat-pigment, such as is always present in muscles undergoing fatty degeneration, and which is the cause of the distinctive yellow colour of xanthoma.

Prognosis is not materially affected by the occurrence of the eruption. Indeed, the cases of diabetes in which it occurs are rather those of the mild than of the severe type. Xanthoma may be the first evidence of glycosuria. Sometimes the glycosuria and the xanthomatous eruption alternate with one another, so that when the skin lesion comes out glycosuria disappears and *vice versa*.

It is important, therefore, to examine the urine in all cases of xanthoma or xanthelasma; and if sugar is not present in it at one examination, fresh specimens should be tested from time to time.

OPHTHALMOLOGY.

NOTES ON THE OPHTHALMOLOGICAL ASPECTS OF NYSTAGMUS.

NYSTAGMUS is a curious, and very often inexplicable, continuous movement of the eyeballs usually towards one side and back to the middle line. It affects both eyes as a rule, but at times it is found in one only. Most frequently it is present at birth or during infancy, and continues throughout life; at other times it is periodic, occurring when the patient is upset or nervously excited: in a large number of cases it is only found when the eyes are directed in, out, up, or down to their extreme limits of rotation. The movements are usually in or out or up and down—that is, the eyes move in the direction of action of the recti muscles; but in rarer cases they are rotatory, and supposed to be produced by the action of the oblique muscles. Sometimes the movements appear to have a purposeful origin, the eyes looking all the time as if trying to see round the corner; this is especially marked should the patient have very defective vision.

The direction of the movement typifies the variety of the nystagmus. If the movements are from side to side or in a vertical direction they are termed nystagmus oscillatorius, horizontalis, or verticalis; if the movement be a rolling one then it is termed nystagmus rotatorius. A combination of these movements is termed accordingly nystagmus mixtus. In general, nystagmus is easy to diagnose; obscure in origin, therefore difficult to account for; and usually impossible to relieve or treat.

The causes of nystagmus are, first and foremost, amblyopia occurring soon after birth or present at birth. Congenital cataract is a not infrequent cause, and so are dense corneal opacities left after an attack of ophthalmia neonatorum, particularly if associated with perforation and consequent anterior polar cataract. Other causes of severe degrees of amblyopia are high refractive errors, albinism, retinitis pigmentosa, or any other degenerated condition of the retina, the result of congenital syphilis.

Nystagmus is also one of the classical symptoms of disseminated sclerosis and it occurs as an evanescent symptom in many cerebral affections. The conjugate deviation of the eyes in brain disease or after a brain injury is frequently nystagmic—that is, not a fixed deviation, but rhythmic in character. Nystagmus occurs as the result of long continuance at certain employments, the most notable of which is mining. The weavers in charge of shuttle machines at times develop nystagmic movements; these, however, are very transient, and rarely if ever persist; they tend to take place only towards one side or the other, and are supposed to be caused by the continual movement of the eyes while watching the moving shuttles.

Nystagmus at times appears in children after they have had an ear syringed, and is then supposed to be occasioned by some irritation of the semi-circular canals; in middle and inner ear disease nystagmus has not infrequently been noted, probably brought about in the same way. Delicate children when cutting teeth have also shown definite transient nystagmus, which has again appeared

with the next tooth cut, and at times has preceded convulsions. A combination of nystagmus and head-nodding movements is met with termed spasmus nutans, and for the most part in children the subjects of well-marked rickets. Finally, nystagmus can be produced voluntarily in some patients by the mere act of looking to their extreme limit to one side or the other. Also nystagmus runs in families, and is distinctly hereditary.

Where a certain degree of amblyopia is present soon after birth, there is either a considerable defect in refraction which prevents the child from learning to fix objects, or there is some extensive change in the retina which makes it impossible for a distinct image, though possibly clearly formed, to be perceived by the perceptive elements of the retina. Hence definite fixing of the eyes never takes place, but they travel backwards and forwards in the neighbourhood of the line of fixation; should the retina acquire normal sensitiveness in such cases the nystagmus will gradually disappear. If a child is born blind nystagmus does not occur; the eyes wander aimlessly from side to side, or up and down, but never with the extremely rapid movements of true nystagmus, and the movements traverse a greater area.

A certain degree of vision is necessary before nystagmus can possibly develop; very young children who are unable to fix objects owing to the blurred image formed upon the retina never learn that in a certain position of the eyes they see best, and the actual act of fixation is never acquired. When the eyes are directed towards the object looked at a clearer impression is gained of it than when the eyes are directed elsewhere, but since the clearest image is necessary at the macula and the direct line of vision is obscured, an endeavour is made by extremely rapid movements of the eyeball to place the macula in the best position to receive a defined image. If the retina has never received a clear image no endeavour is made to place the macula in the best position to perceive it.

Miner's nystagmus is probably caused by a combination of the intense darkness and the strained positions in which the men work, lying on their backs with the eyes directed upwards and to one or the other side. This is an acquired form, and curable by the simple expedient of giving up work in a coal mine.

Patients with nystagmus from very early youth do not complain of objects being in motion or dancing, simply because they do not feel the movements of their eyes and have learnt that they can see only while the movements continue. Even then they get only very blurred impressions of objects, so much so that if by an effort they become able temporarily to stop the nystagmic movements compensatory head movements begin. Patients, however, whose nystagmus has developed later in life do complain that objects appear to dance before their eyes since they have learnt to fix with the eyes at rest.

OTOLOGY.

AURAL FURUNCULOSIS.

FURUNCLES, or boils, are caused by the entrance of micro-organisms, especially the various kinds of staphylococci, into the sebaceous glands of the skin, and it is not surprising that they occur fairly frequently in the external auditory meatus where micro-organisms have a chance of remaining and multiplying more or less undisturbed. Furunculosis may be readily produced artificially by rubbing staphylococci into the skin, and shows a natural tendency to occur on parts which are subject to friction; it is therefore probable that the exciting cause of aural furuncles is usually some slight trauma, such as scratching with a hair-pin, or the bad habit of attempting to clean the meatus by the forcible insertion of a roll of towel. A slight eczema or superficial dermatitis also frequently precedes the attack of boils. They are commoner in women, especially anæmic delicate women, than in men, and are rarely observed in young children.

Though a minor affection, aural furunculosis is an extremely painful one. The pain radiates over the corresponding half of the head, is increased by mastication, and, like other forms of inflammatory pain, is worse at night. There is considerable fever and general constitutional disturbance, combined with sleeplessness and depression. When the external meatus is blocked by swelling there is some impairment of hearing, and possibly this is increased by the accompanying injection of the membrana tympani, but the deafness is not very marked, a useful point of distinction between this affection and acute otitis media.

On examination the meatus is seen to be swollen. The degree of swelling is very variable; it may be confined to the neighbourhood of a single boil, or it may involve the entire meatus and the tragus. In extreme cases there is considerable redness and swelling over the mastoid region causing the auricle to project, but when this is the case the swelling always fills up the groove between the back of the concha and the head. The introduction of a speculum is extremely painful, and the utmost gentleness is required. At an early stage there may be no localisation of the inflammation, and the condition may be called "diffuse external otitis"; or the attack may begin as a circumscribed boil and the inflammation may subsequently spread and become diffuse. Thus there is no sharp line of demarcation between furunculosis or circumscribed external otitis and the diffuse form. The boils occur in the cartilaginous meatus, and it is the close connection between the skin and perichondrium which renders the affection so acutely painful. They appear first as red elevations, and if suppuration occurs yellow spots become visible, which discharge pus; a necrosed centre is extruded before healing can occur. Sometimes small granulations sprout through the opening; on the other hand, a boil may subside without proceeding to suppuration.

The diagnosis is generally a simple matter, but it must be remembered that acute otitis media is some-

times accompanied by great swelling of the meatus, and it therefore becomes of great importance to exclude the latter affection in any case apparently one of furunculosis. The pain, fever, and constitutional disturbance may be as great in the one as in the other, and in the early stage of otitis the discharge may be no more than is often seen in furunculosis. The diagnosis is clear if a definite furuncle can be seen. The bulging of the postero-superior meatal wall, which occurs in acute mastoiditis, must not be mistaken for a boil; the former is flatter and less prominent, and is more deeply situated within the osseous part of the canal. In furunculosis, if the ear is carefully and gently cleaned with cotton-wool mops, the membrane can frequently be seen; though often reddened superficially, it is neither deeply congested nor bulging. The hearing also is much less impaired than in a case of acute otitis media. When there is marked redness and swelling over the mastoid region there is a decided superficial resemblance to acute inflammation within the mastoid process; but there is no pain on deep pressure over the mastoid, though there may be superficial tenderness, and the swelling always occupies the retro-auricular groove, which is never obliterated by true mastoid disease.

To relieve the pain hot instillations are most valuable, such as Cocainæ hydrochlor. gr. x., morphinæ hydrochlor. gr. v., aquam ad 3j., and they should be employed as hot as can be borne. Fomentations should not be used, as they increase the congestion and favour the growth of micro-organisms. The application of cold, though sometimes giving relief, is not to be recommended as a rule. The boils should be opened as soon as they appear, without waiting for the yellow point of suppuration; a special angular furuncle knife is advisable. Nitrous oxide anæsthesia is most necessary, as the operation is extremely painful, and local anæsthetics are useless in this situation. Careful antiseptics is of great importance; the meatus should be syringed with a fairly strong antiseptic, such as 1-1000 perchloride of mercury, and all desquamated epithelium and other debris must be carefully removed. Instillations of rectified spirit containing boracic acid, gr. xv. to the ounce, may then be used three or more times a day. When pain is severe the application of leeches in front of the tragus will give much relief, but leaves rather conspicuous scars. Of general treatment, a brisk purge is indicated at the outset, and calcium sulphide, gr. $\frac{1}{4}$ to 1, is often prescribed. Tonics are, however, more to be recommended, iron and arsenic and, especially, dilute sulphuric acid in rather large doses of twenty to thirty minims three times a day. Those who are subject to attacks of furunculosis should have the ears cleared of cerumen at frequent intervals, and may with advantage massage the meatus with a probe armed with cotton-wool anointed with a weak mercurial ointment consisting of 1 drachm of unguentum hydrargyri nitratis to an ounce of vaseline.

MOTORIZING NOTES.

PRACTICAL HINTS FOR MEDICAL MOTORISTS.

CONSTRUCTION OF INSPECTION PIT.

AN inspection pit should be of the following dimensions: Length, 6 ft.; width, 3 ft. 6 in.; and depth, about 4 ft. 6 in. A "rabbet" or ledge about $1\frac{1}{2}$ in. in width should be left along the edge of the pit upon which the cover boards may rest when the pit is not in use. Steps should be provided at one end, if not at both, and efficient drainage should be provided for. A very useful addition is a piece of 1-in. batten nailed along the side of the pit throughout its entire length, at a height of about 30 inches from the bottom of the pit. The board resting and sliding on these battens forms a very handy and movable shelf, upon which one can place tools, and if made sufficiently strong it can also be used as a seat for the operator.

Where electric light is available a cable should be laid down to the pit, and one or two wall-sockets placed along the side of the pit, so that portable lamps can be connected. On no account should any other light, except a safety lamp of the Davy or miner's type, be used in the pit. Petrol vapour is supposed by many to be lighter than air, and is therefore thought to rise upward rather than accumulate in lower strata of the atmosphere. This is not the case, however, as petroleum spirit vapour is heavier than air, and always accumulates lower down. It is always well to see that the cover is put over the pit when it is not in use, lest someone, through ignorance, forgetfulness, or carelessness, should fall in.

ECONOMY IN PETROL.

The distance which one driver can cover upon a given quantity of spirit is often a subject of much astonishment to the driver of another car of similar weight, strength, and build, who for his part has found it almost impossible to obtain corresponding results with his own vehicle, although, so far as can be seen, the two cars are otherwise identical. The whole explanation lies in the fact that the motorist who travels the greater number of miles upon a definite quantity of petrol has been taught or has discovered the correct method of running his engine. This is, in essence, the principle that the carburettor must be allowed to take in as much air as it possibly can, provided always that the maintenance of a good mixture is still secured. The most effective mixture of spirituous vapour and air is that which will drive the engine at its highest power, and this power is in no way augmented by increasing the richness of the mixture.

The real significance of the above assertion can easily be ascertained by any motor-car owner in the following manner: Close down the air opening to the carburettor, so as to obtain a rich mixture for starting the engine, and then turn the starting handle, when the motor will begin to work. Attention should now be turned to the air inlet. Open this slowly, and if a governor is fitted this should be put out of action by pulling up or pushing down

the accelerator, as the case may be. As the mixture assumes its better proportion the engine will perceptibly quicken its speed, and as it gains in speed so, of course, will its power increase. Continue opening the air inlet until this is wide open, and if there is no marked diminution in the speed of the engine it may be assumed that it is now running on the least proportion of petrol obtainable. If, on the other hand, the engine begins to slow down, the air inlet should be closed down again until the engine picks up its previous speed and gives out the note that means power. The engine is now running to its best advantage, and is consuming the smallest possible amount of petrol. With such a mixture the tendency to overheat is very considerably lessened, and thereby the lubricating oil is given the best possible chance of carrying out its functions to the greatest advantage. In this way a saving is effected in the consumption both of petrol and of lubricating oil, although the latter is, of course, but a trifle compared with the former.

CARRIAGE OF SPARE TYRES.

Most drivers when starting on a long tour, and especially if their tyre covers show signs of wear, take care to provide themselves with a spare cover and tube. The chief trouble in connection with the spare covers is that no suitable place is provided for carrying them on many cars. Most owners, for want of a better place, fasten them on the back of the car, and very often carry a spare tube, partially inflated, inside the cover, under the impression that they could not have a better place than this in which to carry it, against the time when it is needed for repair or replacement. In reality no position could be worse for carrying an air tube than inside a cover, where it is, especially if fastened at the rear of the car, a prey to all the dust and dirt thrown up by the hind wheels. This dust, with its small particles of grit, is carried inside the cover and settles at the bottom, between the air tube and the cover. Here it acts like a rough file upon the surface of the air tube; for whilst the vibration of the car rubs the surfaces of the air tube and cover together, the particles of dust lying between them act like emery paper upon their fabric. Air tubes should on no account be carried in this way. They should be folded up and the valve should be well dusted with French chalk and wrapped up in rag and placed in a special bag.

Where the type of body permits, a drawer or false floor should be provided beneath the rear floor boards, wherein a spare tyre may be carried in safety. In this connection it may be mentioned that some motorists who are very careful to provide themselves with spare tubes and covers quite overlook the necessity of carrying, in addition, spare valve parts, such as rubber washers, plugs, etc., and so forth. A supply of these should never be wanting on a car.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

HOW TO SEE A LARYNX.

PRACTICAL NOTES BY A "G.-P.-LARYNGOLOGIST."

ONE thing that in student days our teachers used often, and with obvious sincerity, to impress upon us, was that the mistakes of clinical beginners arise not so much from ignorance of such and such an indication, as by neglecting to look for it. This aphorism has certainly an application to laryngeal affections, since morbid lesions in this region, unlike much in general surgery, are not difficult of diagnosis because of the ease with which they are recognisable from text-book pictures. Inspection of two or three appropriate cases will enable any medical man to distinguish, say, an angio-fibroma of the vocal cord from a papilloma growing in a similar position—which, for practical purposes, is rather a refinement in diagnosis. But he must look at the larynx. And to do this he must be master of a certain technique only to be acquired by practice and perseverance.

The first difficulty lies in the management of reflected light, which every progressive practitioner should be familiar with. Until this is mastered, even the fauces cannot be seen properly, whilst the diagnosis of aural troubles, so common in all classes, becomes mere guess work. To keep light focussed on a particular spot under all the exigencies of physical examination is a mechanical accomplishment to be practised and learnt. For use in general practice the most suitable illumination is undoubtedly an incandescent light. It is brilliant, and whiter than that from any form of electrical lamp, except the costly and cumbrous Nernst. This quality of whiteness is important, as the dark red colour of the mucosa, often present in laryngeal disease, lights up badly with a yellowish illumination. Other points in favour of the incandescent are that at a pinch the bull's eye attachment may be dispensed with, and that it serves to warm the throat mirror. It is usual to have the lamp at the patient's left hand, and on a level with the forehead of the practitioner, who looks through the hole in the head mirror with his right eye.

Two or three thicknesses of soft crinkled paper, similar to that used for lamp-shades, make a good tongue-cloth. The tongue should be extruded to its utmost, and the tip held between the observer's thumb and first and second fingers—the third and fourth raising the upper lip out of the line of vision. Fairly often the tongue is too moist and slippery to be grasped firmly; if so, it should be cleaned with the tongue-cloth stretched between the two hands, and the patient told to keep it out while a fresh dry cloth is being obtained. A No. 5 throat mirror, its face previously warmed until the condensation disappears, and the temperature of its back tested against the surgeon's cheek, is now arched over the dorsum of the tongue and pressed firmly upwards and backwards against the base of the uvula, the shank being steadied against the corner of the mouth. If the patient shows signs of any qualms, these may be lessened by telling him in a decided manner to go on breathing quickly through the mouth. If, how-

ever, they continue, it is best to remove the mirror and use cocaine. One of Sir Frederick Treves' dicta is that a physical examination which causes pain is not worth much; it is true, at all events, of laryngoscopy. The intermittent glimpses obtained during the struggles of a "Channel crossing" inspection are useless for diagnosis.

With the following procedure cocaine may be employed without any risk and without ill-effect. A one-grain dried preparation of cocaine is freshly dissolved in ten minims of tap-water, since solutions of this drug do not keep longer than a week. The patient is given a basin to hold in his lap, and warned to spit out at once after each application. A small wisp of cotton wool, held in angled forceps, is now dipped in the cocaine and drawn gently over the arch of the soft palate. This is repeated twice at intervals of a minute, and after a further five minutes the fauces are pale and anæsthetic. In four cases out of five what will appear first in the mirror will be mainly the upper surface of the epiglottis; that is, as it were, the lid of the voice-box instead of its interior. The manœuvre which almost infallibly brings about this lifting of the lid is to tell the patient to phonate "ee" shrilly, and at the same moment to twist the mirror slightly about its horizontal diameter (keeping it firmly pressed back), so that the lower half of its circumference rises and comes forward a little. Sometimes the patient cannot phonate. Then one must secure a laugh by the time-honoured device of asking him to "give a graceful smile." It is important to remove the mirror before "gagging" occurs, and to wait three or four minutes before re-examining. In this way a reliable laryngeal inspection may be made, and the commoner lesions—pachydermia, singer's nodes, characteristic tuberculosis, functional aphonia—identified with certainty. It can be done, too, without discomfort or annoyance to the patient; indeed, on the contrary, with a very beneficial mental and moral effect. There is nothing which so inclines patients to carry out treatment exactly as the favourable impression produced by a workmanlike preliminary examination of the site of disease.

BOOKS RECEIVED.

CITY PRESS.

"The City of London Directory," 1909.

P. S. KING AND SON.

"The Problem of the Feeble-minded."

CHARLES GRIFFIN AND CO.

"Official Year-book of the Scientific and Learned Societies of Great Britain and Ireland."

METHUEN AND CO.

"Sister K," by Mabel Hart.

HAMMOND, HAMMOND AND COMPANY.

"Children of the Poor." By A. Davies Edwards, M.B., etc.

HOSPITAL ADMINISTRATION.

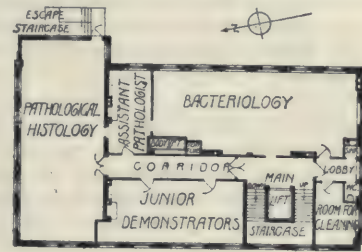
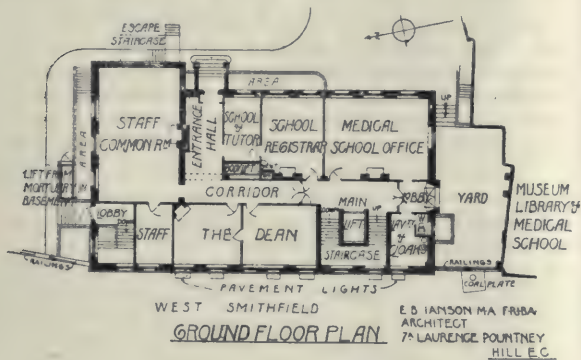
CONSTRUCTION AND ECONOMICS.

THE NEW PATHOLOGICAL BLOCK OF ST. BARTHOLOMEW'S HOSPITAL.

WE publish to-day a further instalment of our description of the important work of reconstruction which is in progress at this ancient institution.

The new building, which is devoted to the purposes of pathological teaching and research, faces West Smithfield and adjoins the Museum Library and Medical School buildings erected some years back. Including the basement there are six stories. The basement contains the mortuary chapel where the body of a deceased patient can be viewed by

laboratory for chemical pathology, and lecturers' private room. On the fourth floor is the post-mortem room with rooms adjoining for demonstrators, storage, etc. The post-mortem room, which, as pointed out above, is connected with the

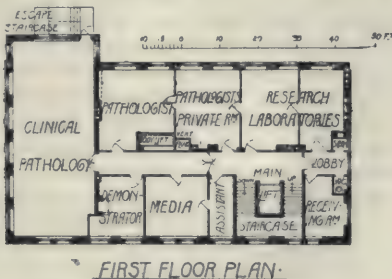
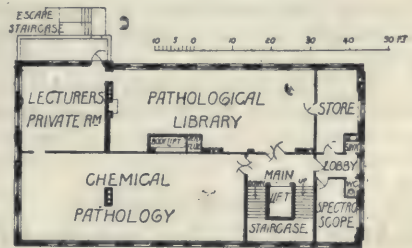


mortuary by a lift, contains six necropsy tables—four of slate and two of porcelain—and an adequate supply of washing-troughs and water-sprays.

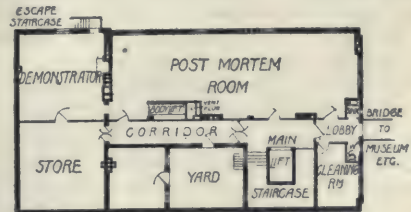
The building is probably the most complete of its kind ever erected, and is striking evidence of the

relatives and friends or by a coroner's jury. Adjoining is a waiting-room. The mortuary proper is a large cold chamber capable of holding eighteen bodies, and provided with a refrigerating apparatus. There is a special lift by which bodies can be raised to the top story, which contains the post-mortem room.

On the ground floor are the school administration offices and a common room for the staff. The



handsome furniture of these rooms has been provided by private subscription among the members of hospital and medical school staffs. The first floor contains a large laboratory for clinical pathology, two research laboratories, rooms for the pathologist and demonstrator and room for media with assistants' room adjoining. The second floor provides three large laboratories for pathological histology, bacteriology, and for junior demonstrators. On the third floor is the Kanthack Memorial pathological library,



increasing importance of the part played by the pathological department in the modern hospital. This aspect of the subject is further emphasised by the fact that altogether some 25 men will be con-

stantly at work in pathological research, apart from the general students.

The building was designed and carried out under the superintendence of Mr. E. B. I'Anson, F.R.I.B.A., the architect to the hospital.

EDITOR'S LETTER-BOX.

"THE IDEAL GRADUATE STUDY INSTITUTION."

To the Editor of THE HOSPITAL.

IN reference to our preliminary article under the above title, published in our issue of July 3, we have received from Professor R. Kutner, director of the "Kaiserin Friedrich-haus" for the Promotion of Graduate Study in Medicine, Berlin, a letter, dated June 29, 1909, from which we publish the following extracts:—

"... The paper gives a complete idea of our organisation and very accurately represents the present position. Only one datum is wanting. Last year (March 1908) the committee of the several allied States (Bundesstaaten)—i.e., the Prussian Committee (Central Committee), the Bavarian Committee, the Baden Committee, the Saxon Committee, and the Württemberg Committee, as also the committees of the smaller allied States—have united to form an Imperial Commission for the Promotion of Graduate Study in Medicine (Fortbildungswesen). As you will see from the enclosed statutes of the Imperial Commission, the latter also has its headquarters in the Kaiserin-Friedrich-haus. The most important advantages thereby obtained are:—

"(1) That not merely the Ministries of Education of the individual allied States, but the Empire as such supports our endeavours with counsel and active help. In order to show his personal interest, His Majesty the German Emperor has lately contributed Mk. 10,000 towards our endeavours out of his 'Dispositionsfonds.'

"(2) That now the arrangements for the higher education of doctors in the whole German Empire can be made on a uniform plan. Possibly you can, on a suitable occasion, add the information that an Imperial Commission for the Promotion of Graduate Study in Medicine has been formed in our country.

"... In a few days the last annual report on the Promotion of Graduate Study in Medicine in the German Empire will be ready (either the end of this or the beginning of next week); I shall then take the liberty of sending you a copy."

NEW APPLIANCES & THINGS MEDICAL.

CAMPBELL'S SOUPS.

WE have received from the manufacturers, the Joseph Campbell Company, of Camden, New Jersey, U.S.A., and 6 and 8 Bouverie Street, London, E.C., samples of their condensed soups, which we have now investigated and can recommend to medical practitioners and others responsible for invalid dietaries. Of the twenty-one varieties of these soups now upon the market, we have received and examined five which are considered most appropriate to hospitals and the sick-room. These are styled respectively "Clam Chowder," "Clam Bouillon," "Oxtail," "Mock Turtle," and "Mutton Broth." We have found them easy to prepare, pleasant to taste, and very digestible, and we can well believe the statements made by the manufacturers as to the purity of the ingredients and the cleanliness and security from contamination of the method of preparation. Chemical preservatives are rendered unnecessary by the submission of the sealed vessels of soup to a temperature of 240° F. after their contents have been passed from the blending kettles into the tins through glass-lined pipes. The ease and rapidity with which these soups can be prepared, and their flavour and digestibility, render them suitable for invalids as well as for ordinary household use. We have further received from the same makers sample bottles of their tomato ketchup and spiced mustard, which have also impressed us favourably.

SIXTEENTH INTERNATIONAL CONGRESS OF MEDICINE—BUDAPEST.

August 29th—September 4th, 1909.

THE travelling arrangements to and from the Budapest Congress have now been issued. The *Cartes d'identité* enabling members to avail themselves of the reductions have been issued to everyone who has paid his subscription. The South-Eastern and Chatham Railway Company quote specially reduced rates for parties of not less than twenty passengers travelling together on the outward journey to the Congress, but makes no reduction to members travelling individually. The Zealand Steamship Company, which runs through carriages from Flushing to Vienna in connection with the day and night services from Victoria via Queen-boro', will also allow a reduction on the ordinary fare for parties who travel together. The Great Eastern Company issues circular tour tickets as follows: London, Harwich, Hook of Holland, Rotterdam, Cologne, Mayence, Frankfurt o/M, Passau, Linz, Vienna, Budapest, Vienna, Dresden, Hanover, Salzbergen, Hook of Holland, Harwich, and London. The cost of these tickets is £10 14s. 5d., and they are available for ninety days, second-class rail in England, first-class on the G. E. Co.'s steamers, second-class rail on the Continent and first-class on the Rhine steamers, or second-class rail between Cologne and Mayence. By the night service leaving Liverpool Street at 8.30 p.m. there is a through carriage with a restaurant car from the Hook of Holland to Frankfurt (5.48 a.m. to 4.10 p.m.) and a sleeping car from Frankfurt to Vienna (4.37 p.m. to 7.30 a.m.). If the journey is taken via Dresden there is a through carriage with restaurant car from the Hook of Holland to Hanover (5.25 a.m. to 3.5 p.m.), a through carriage with restaurant car from Hanover to Leipsic (3.5 p.m. to 10.2 p.m.) and a sleeping car from Dresden to Vienna (10.2 p.m. to 7.40 p.m.). The G.E.R. allow a further reduction of fare when twenty members of a party travel together. Mr. J. Y. W. Macalister issues a circular from the Royal Society of Medicine stating that he has organised a party for the Fellows of the Royal Society of Medicine and for the friends of Fellows, although they are not connected with the Society, who are properly vouched for. The party will be accompanied by an experienced courier. It will travel by the train de luxe both on the outward and homeward journeys, and will be lodged in the best hotels. The inclusive charge is thirty-six guineas via Ostend and thirty-eight guineas via Calais. The official reductions are fifty per cent. on the French lines, if application be made at least three days before the ticket is required upon the pink form issued. The form must be stamped at the Congress before it is available for the return journey. The Royal Hungarian State Railways make a reduction of fifty per cent. to members furnished with green card of identity. It appears from the instructions issued that very few members of the British Section will be able to obtain the authorised reductions without breaking their journey at the frontier towns, as it has been found impossible to establish any system of through tickets at reduced fares.

THE Hospital for Invalid Gentlewomen, established at 90 Harley Street fifty-six years ago by Viscountess Canning and Miss Florence Nightingale, is closed, owing to the expiration of the lease. A new hospital for thirty-two patients is in course of construction at 19 Lisson Grove, and will be opened for the reception of patients towards the end of the year. Five thousand pounds are still needed to complete the building and equipment. Donations should be sent to W. C. Bridgeman, Esq., M.P., 13 Mansfield Street, W.

NEWS AND COMING EVENTS.

THE London Hospital Medical College Endowment Fund has received a gift of £2,000 through Dr. Luther Martin, an old student of the hospital.

MR. H. MORRISTON DAVIES, M.C. (Cantab.), F.R.C.S., has been appointed assistant surgeon to University College Hospital, Gower Street, W.C.

DR. W. WYNN WESTCOTT, J.P., coroner for North-East London, has recently been elected president of the Coroners' Society of England and Wales, and Mr. Walter Schröder, Deputy Coroner for Central London, has been reappointed honorary secretary of the society.

THE retirement is announced from his post as Senior Surgeon to the Cancer Hospital, Fulham Road, of Mr. Frederick Bowreman Jessett, F.R.C.S. Mr. Jessett must surely be the *doyen* of the active members of London hospital staffs, but no one who has seen him operate would guess the full tale of years he has been in harness. For Mr. Jessett was already qualified before the Medical Council was entrusted with the compilation of the first Medical Register. His published works include many contributions to the literature of cancer, and he has been President of the British Gynaecological Society.

THE late Mrs. Charlotte Greenhill, of Hyde Park, London, who died in April, left £162,737, of which a large amount, estimated at £90,000, is bequeathed to charities. Among the bequests are £2,000 to the Royal Free Hospital, Gray's Inn Road; £1,000 each to the Middlesex Hospital, the Children's Hospital, Paddington Green, and the West London Hospital, Hammersmith; and £200 each to the West London Hospital Ladies' Association and the Ladies' Association of the Royal Free Hospital. Subject to other legacies the testatrix left one-third of the residue of her estate to the Royal Free Hospital, Gray's Inn Road, and one-sixth each to the Children's Hospital, Paddington Green, and the Royal Ophthalmic Hospital, City Road.

HER MAJESTY THE QUEEN has once more shown how deep and practical an interest she takes in the welfare of medical charities. By signifying her approval of the proposed endowment of a bed in the York County Hospital in memory of the late Canon Fleming, and by endorsing this with a personal donation, Her Majesty has given cause for much satisfaction to the many friends and admirers of the lamented Canon of York Minster, and to the managers and supporters of the hospital of that city.

THE Prince and Princess of Wales, the Duke and Duchess of Connaught, and Princess Christian gave their patronage to the Carnival, held on July 1, at the Crystal Palace, in aid of the fund for the removal of King's College Hospital to South London. A feature of the Carnival was a bazaar, and the presidents of stalls included the Premier's wife, Lady Lansdowne, and many other distinguished ladies. Dramatic performances took place at intervals, and many well-known music-hall and concert artists assisted in the three variety performances. In the grounds athletic sports were organised by the Blackheath Harriers, and the programme also included a cricket match, gipsy encampment, pastoral plays, band performances, wrestling matches, swimming races, and an ascent of Professor Huntington's balloon.

THE Chelsea Hospital for Women has received from Lady Ilchester and the members of the Ladies' Committee the sum of £260, being the proceeds of the concert recently given at Holland House by kind permission of Mary, Countess of Ilchester.

HIS MAJESTY THE KING during his recent visit to Gloucester made the following gratifying reference to the local Infirmary:—"I am happy to take this opportunity to inform you that I give my permission for the title 'Royal' to be prefixed henceforward to the name of the Gloucester General Infirmary in recognition of the admirable work done by those responsible for its management, and the devoted and successful efforts of its staff in the prevention and alleviation of human suffering."

THE annual general meeting of the British Medical Association for the present year will be held in the Assembly Hall, Belfast, on Friday, July 23, at 12 noon. This meeting is to comply with Article XII. of the Rules of the Association, and will adjourn forthwith until Tuesday, July 27, at 2.30 o'clock. The annual representative meeting will be held in the Assembly Hall, Belfast, on July 23 (and following days as required), immediately after the annual general meeting, fixed for 12 noon on Friday, July 23.

THE late Dr. Hall, of St. John's Wood, and formerly of Crouch End, left estate of the net value of £87,679. His many charitable bequests include legacies to Epsom College, the British Medical Benevolent Fund, the National Hospital for the Paralysed and Epileptic, and the Royal London Ophthalmic Hospital, and £1,000 to the Research Defence Society. The balance of Dr. Hall's estate goes to the University of Glasgow, of which he was a graduate, for the foundation of tutorial fellowships.

THE financial position of the Great Northern Central Hospital, Holloway, is causing grave anxiety to the committee of management. The income for the year 1908 showed a serious falling off, especially in donations and legacies, with the result that there was a deficiency between receipts and expenditure at the end of the year of £4,600. This deficiency was met by recourse to a loan from the bankers, raising the amount owing to them to £10,800. The receipts for the year show little or no improvement. At the present moment £3,000 is owing to tradesmen, and there are practically no funds available.

THE death is announced at Hampstead, at the age of 58, of Mr. Frederick Nutcombe Hume, M.R.C.S.Eng., medical superintendent of the North-Western Fever Hospital. Mr. Hume was a major of the R.A.M.C. (Territorial), and had served as a surgeon to the National Aid Society's ambulance in the Servo-Turkish war in 1876; and in 1885 he saw active service again during the Servo-Bulgarian war, while a year later he acted as surgeon in the Russo-Turkish campaign. He was also successively surgeon and director to the English Hospital at Belgrade. In recognition of his various military services, Mr. Hume was decorated with the Takova, Medjidieh, and St. Sava Orders, and was awarded Serbian and Turkish war medals.

THE opening ceremony of the new Manchester Royal Infirmary took place on Tuesday, July 6, when the buildings were declared open by His Majesty the King, who was accompanied by Queen Alexandra.

We learn that, previous to the opening of tuberculosis exhibitions in various centres in England, the exhibits shown at the recent Tuberculosis Exhibition at Whitechapel have been transferred to the "White City" at Shepherd's Bush.

At a meeting of the Physiological Society held at Oxford on June 26, the president, Professor F. Gotch, presented to Dr. F. W. Pavy, in commemoration of his eightieth birthday, a silver bowl inscribed as follows: "Frederick William Pavy, M.D., F.R.S., May 29th, 1909. From the Physiological Society in token of affection and admiration."

MR. SINCLAIR WHITE, F.R.C.S., on the occasion of the last meeting of the Central Council, was unanimously elected President of the British Medical Association in place of the late Mr. Simeon Snell. Mr. Sinclair White is Senior Surgeon to the Royal Infirmary, Sheffield, and was largely responsible for the success of the last annual meeting of the association which was held in that city.

THE Duke and Duchess of Connaught visited University College on Thursday, July 1, when His Royal Highness opened the Hogarth Fair, which has been organised by the students with the object of raising funds to pay off the debt on their new athletic ground at Perivale. Their Royal Highnesses were received by Lord Reay, Vice-Chairman of the College Council, and Lord Herschell. In the quadrangle was mounted a guard of honour of the University College and Hospital Company of the Officers' Training Corps, who received the visitors with a Royal salute and were afterwards inspected by His Royal Highness.

A CONFERENCE, under the auspices of the Invalid Children's Aid Association, was held at Denison House, on Tuesday and Wednesday, June 22 and 23. The Earl of Aberdeen presided, and spoke of the health work done in Ireland. Speeches were made by Mr. Warrington Howard and by the delegates from Glasgow, Liverpool, Manchester, etc., while Miss Adler contributed a paper (on "Open-air Schools." At the afternoon session, presided over by Dr. Chittenden Bridges and subsequently by Dr. Arthur Saunders, some account was given by Miss Broadbent of phthisical cases referred to the association, and papers were read on the "Anti-tuberculosis Dispensary System," by Dr. D. J. Williamson; on the "Results of Treatment of Tuberculosis in the Metropolitan Asylums Board Homes for Children," by Dr. Elliot Browne; and on the "Children's Sanatorium at Holt," by Dr. Gillam. A reception was given in the evening by Sir Alfred and Lady Fripp, while on Wednesday morning, when the conference was resumed, the chair was taken by the Duchess of Sutherland and later by Mrs. Burgwin, of the L.C.C. At the afternoon session Dr. Loch presided, and the subject was the Poor Law Report with regard to medical aid for children. After Dr. Loch's paper Dr. Allan spoke on health societies, and was followed by Dr. Lowrie and others. On both Tuesday and Wednesday the children's section of the Tuberculosis Exhibition, recently held in Whitechapel, was shown to the delegates in a room of Denison House.

THE sixty-eighth annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be opened on the morning of Thursday, July 22, at the West Riding Asylum, Wakefield.

THE annual general meeting of the Asylum Workers' Association will be held on Tuesday, July 13, at 3 p.m., at the Medical Society's House, 11 Chandos Street, Cavendish Square, W., under the presidency of Sir William Collins, M.D., F.R.C.S., M.P.

AN announcement appears in the *London Gazette*, dated at the Lord Chamberlain's Office, St. James's Palace, July 6, to the effect that the King has been graciously pleased to appoint Sir Alan Reeve Manby, M.V.O., M.D., to be Physician Extraordinary to his Majesty.

THE annual luncheon of the Continental Anglo-American Medical Society will be held on Thursday, July 29, at Belfast, during the annual meeting of the British Medical Association. Members intending to be present should communicate with Dr. C. G. Jarvis, the hon. secretary, 81, Boulevard Malesherbes, Paris.

HIS MAJESTY'S permission has been granted to Mr. Edward S. Crispin, M.R.C.S., Assistant Director of the Sudan Medical Department, Khartoum, to accept and to wear the Imperial Ottoman Order of the Osmanieh of the Fourth Class, conferred upon him by the Khedive of Egypt in recognition of valuable services.

PROFESSOR ERNEST W. WHITE, M.B. (Lond.), has been elected Emeritus Professor of King's College, London (University of London), on his retirement, after twenty years' service, from the professorship of psychological medicine. The vacancy thus occasioned at King's College has been filled by the appointment to the professorship of psychological medicine of Dr. Robert Hunter Steen, M.D. (Lond.).

THE many medical men who have been associated with the National Hospital in Queen Square, London, will be interested to learn of the recent presentation to Mr. Edward Hill, Senior Dispenser to the National Hospital for the Paralysed and Epileptic, on his retirement after twenty-two years' service. The gift took the form of a solid silver tea service and a tray suitably engraved.

VOTING took place on July 1 at the Royal College of Surgeons of England for the election of three Fellows to the Council of the College. The President, Sir Henry Morris, announced the result of the poll to be as follows: Sir Watson Cheyne, 420 votes; Mr. William Harrison Cripps, 385 votes; Mr. Richard Clement Lucas, 356 votes; Mr. John Bland-Sutton, 333 votes; Mr. Walter Hylton Jessop, 328 votes; Mr. Charles Alfred Ballance, 261 votes; Mr. Arthur Mayo Robson, 208 votes. The President thereupon declared Sir Watson Cheyne, Mr. Lucas, and Mr. Cripps to be elected members of the Council. The poll was the largest on record, 971 Fellows recording their votes. Mr. H. J. Price and Mr. Haig Brodie were the scrutineers. All three successful candidates have already served upon the Council of the College; but Mr. Harrison Cripps, who was elected in the first instance to fill an intermediate vacancy, had held office for less than the full period.

NURSING ADMINISTRATION.

THE ADMINISTRATIVE SIDE OF SANATORIUM WORK.

I. NURSING.

THE last few years have seen an enormous extension of sanatorium work, and there seems reason to believe that this branch of curative treatment is only at the commencement of its development. The open-air colony for working patients is likely to become, as time goes on, an indispensable part of municipal sanitary effort, and its success will depend in great measure on the degree to which it can be made self-supporting. Since it has been discovered that it is not merely unnecessary, but actually harmful, to keep the consumptive in idleness, numerous more or less paying industries have grown up in connection with open-air treatment. But one and all demand a trained method of treatment, and the maintenance of a strict rule of life, through which residence in the sanatorium approximates to invalid life, even although in many particulars it diverges widely from it.

In that most essential part of modern treatment for the sick the nursing, sanatorium life differs radically both from that of the hospital and from that of the convalescent home. In an ordinary convalescent home the patient is hardly considered to require nursing at all, but merely rather more attention to health than is incumbent on people in sound health. In the sanatorium he undergoes a very exact form of treatment, but instead of surrendering himself blindly, as in hospital, to the dictates and care of the nurse in attendance, he is required to learn the art of nursing himself. Every action of his day, almost every movement he makes, is thought out beforehand, and is done in conformity to a rule which he is to have securely printed on his mind. Hence the task before the managers of a sanatorium is not so much to nurse their patients as to train them to nurse themselves and one another.

The keystone of the sanatorium, as of the hospital household, is the matron. There is danger that the admitted attractiveness of this work, the opportunities it offers to a woman of resource and ability to reveal her powers for the good of others, may induce managers to whittle down the salaries of these posts to the lowest point which will enable an educated woman to provide for personal necessities. It is perfectly true that work of this description, like the work of the physician and the artist, is not to be measured by a money standard. But it is also true that only by offering an adequate salary can the managers deserve to retain and secure the services of capable administrators, thoroughly qualified to inspire and direct the difficult work carried on in the sanatorium. The matron should be a fully-trained nurse from a first-rate training school, perfectly familiar with the routine through which raw beginners are transformed into responsible heads of departments, and accustomed to make the best of indifferent material. She should have passed some time in one of the modern open-air sanatoriums where the patients are exercised in graduated work, and she should be familiar with every phase of pul-

monary disease. She should have a good working knowledge of accounts, and must understand practical housekeeping. She must have the instincts of a good colonial, with the power of conforming to unfamiliar circumstances, where life is somewhat of a perpetual picnic, and the ordinary formalities which the housekeeper loves must be dispensed with altogether. A conventional matron, always striving to introduce institution routine into outdoor life, will not only be miserable herself, she will reduce all her subordinates to despair.

In order not merely to keep down expenses but to maintain the feeling of self-help, the nursing must be kept down to the lowest possible level. Bad cases, unlikely to respond to treatment, will not be received. Should patients develop serious symptoms, it is wiser to remove them immediately to other institutions. Therefore, under normal conditions, nursing duties are light. The patients are trained from the beginning to take their own temperatures. The record of their pulse falls to the nurses, and newcomers who are confined to bed must be attended to. There is no night work, and the matron will probably think little of occasionally rising to visit a patient herself whose symptoms give rise to anxiety. Under normal circumstances the matron will find that a staff of two nurses will suffice her for the ordinary small-sized sanatorium, containing from 20 to 40 beds. The senior nurse should have had previous experience in a sanatorium or special hospital for diseases of the respiratory organs. The other may be a probationer preparing either for sanatorium work or for entering hospital; it is found that this type of experience is frequently of the greatest service in settling the health of girls who want to be nurses, and preparing them for their future career. It is the experience of all matrons that sanatorium life is unsuited for the fully trained nurse. There may be months when she has no opportunity for doing any regular nursing, and she can hardly fail to become restless in the consciousness that her powers are becoming rusty.

Working, however, on this low staff, the matron must undoubtedly have full liberty to engage extra nurses whenever it may become necessary. With a large party of phthisical patients under her care she may at any moment find herself confronted with sudden cases of severe illness, in which removal is impossible, and the most skilled nursing is needed. She ought to be in touch with a supply of nurses on which she can draw for such emergencies, and there should be no delay such as must throw the ordinary work of the sanatorium out of gear, and strain the powers of the regular staff. The disposition to struggle on without extra help until all concerned are worn out, is not to be encouraged. Ready access to extra nurses and prompt recourse to their aid in emergency must be considered indispensable to maintaining efficiency with the lowest possible permanent staff.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, JULY 12 to 17.

LONDON SCHOOL OF CLINICAL MEDICINE,
Seamen's Hospital, Greenwich, S.E.

At 2.15 p.m.

July 12, Sir Dyce Duckworth, Gouty Phlebitis.

At 3.15 p.m.

July 15, Sir W. Bennett.

THE POST-GRADUATE COLLEGE, West London
Hospital, Hammersmith, W.

At 10 a.m.

July 12 and July 15, Surgical Registrar, Demonstration.

July 16, Medical Registrar, Demonstration.

At 12 noon.

July 12, Dr. Bernstein, Pathological Demonstration.

At 12.15 p.m.

July 13, Dr. Pritchard, Practical Medicine.

July 14 and July 17, Dr. Grainger Stewart, Practical Medicine.

At 5 p.m.

July 12, Mr. Bidwell, Practical Surgery—VI.

July 13, Mr. Bidwell, Operations for Gastric and Duodenal Hæmorrhage.

July 14, Mr. Lloyd Williams, Extraction of Teeth—When and How.

July 15, Mr. Keetley, Clinical Lecture.

July 16, Mr. Armour, Clinical Lecture.

MEDICAL GRADUATES' COLLEGE AND
POLYCLINIC, 22 Chenies Street, W.C.

At 5.15 p.m.

July 12, Mr. James Cantlie, Tropical Diseases met with in England.

July 13, Dr. Newton Pitt, Cerebral Syphilis.

July 14, Mr. Arbutnot Lane, The Surgical Treatment of Constipation.

July 15, Dr. James Collier, Disseminate Sclerosis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE,
Prince of Wales's General Hospital, Tottenham, N.

At 4.30 p.m.

July 13, Dr. A. E. Giles, The After-results of Ovariectomy.

NATIONAL HOSPITAL FOR THE PARALYSED
AND EPILEPTIC, Queen Sq., Bloomsbury, W.C.

At 3.30 p.m.

July 13, Dr. Gordon Holmes, Familial Ataxia—Anomalous Cases.

THE HOSPITAL FOR SICK CHILDREN,
Great Ormond Street, W.C.

At 4 p.m.

July 15, Mr. Addison, Syphilitic Disease of the Bones and Joints.

CENTRAL LONDON THROAT AND EAR
HOSPITAL, Gray's Inn Road, W.C.

At 3.45 p.m.

July 13, Mr. Gay French, Tracheoscopy.

July 16, Dr. Wyatt Wingrave, Clinical Pathology.

The following appointments to demonstratorships in the Medical School of St. Bartholomew's Hospital were made on July 1: Operative Surgery, Mr. G. E. Gask, F.R.C.S.; Anatomy, Mr. R. B. Etherington Smith, F.R.C.S., Mr. H. W. Wilson, F.R.C.S., and Mr. R. Foster Moore, F.R.C.S.; Physiology, Dr. C. M. Hinds Howell; Junior Demonstrators of Pathology, Dr. Harold Pritchard (medical), Mr. W. Girling Ball, F.R.C.S. (surgical); Pharmacology, Dr. F. A. Bainbridge; Chemistry, Dr. K. S. Caldwell, B.Sc.; Physics, Mr. F. Lloyd Hopwood, B.Sc.; Biology, Dr. W. A. Cunningham, M.A. Cantab., Ph.D. Jena; Midwifery, Mr. J. D. Barris, F.R.C.S.

LITERARY NOTES.

THE current issue of *Guy's Hospital Gazette* contains, in the form of a supplement, an excellent photogravure portrait of the late Dr. Peter Horrocks, obstetric physician to the hospital. This portrait has been reproduced from the last photograph taken of Dr. Horrocks, and is a very characteristic likeness. Copies will be sent for 6½d. post free to any address on application to the editor of the *Gazette*.

THE report for 1908 of the Mission to Lepers in India and the East, received from the London Office, 33 Henrietta Street, W.C., gives an account of work in seventy-three stations and among 7,295 lepers. Over 600 untainted children of leprosy parents are being educated in homes connected with the Society. The expenditure for the year was £28,882, of which £8,638 was received abroad, mainly in grants from the Indian Governments. This indicates that the Mission has gained the confidence and sympathy of the authorities. The Society's offer to admit the Chinese leper recently discovered in Cardiff into one of its Chinese asylums will probably be accepted.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY: NOTICE.

AN extraordinary general meeting of the members of the London and Counties Medical Protection Society, Limited, is announced for Wednesday next, July 14, at 4 p.m., at the office of the Society, 31 Craven Street, Strand, London, W.C., when the following special resolution, which was carried by the requisite majority at an extraordinary general meeting on June 23, 1909, will be submitted for confirmation: That the Articles of Association of the Society be altered in manner following, viz.:

To alter Articles (2), (3), (5), and (13) respectively so as to read thus:—(2) "Any registered medical or dental practitioner may, if accepted by the Council, become a member of the Society." (3) "Each candidate for membership shall sign and deliver to one of the Secretaries an application in such form as may be approved by the Council." (Omitting the words of the form at present included in the article.) (5) "The Council may, by giving 14 days' notice to any member whose conduct or membership is in the opinion of the Council detrimental to the Society, determine his membership, and thereupon he shall cease to be a member, but shall nevertheless pay all subscriptions and calls in arrear." (13) "The Council shall consist of a President, Vice-Presidents, one Treasurer, one General Secretary, one Financial Secretary, and 12 additional members of Council, who shall all be elected annually by the Society at its annual meetings, together with the Presidents of all districts recognised by the Council, who shall be *ex-officio* members of the Council. The quorum for a Council meeting shall be three."

Dated June 30, 1909.

HUGH WOODS, *General Secretary*.

A. G. R. FOULERTON, *Financial Secretary*.

THE HOSPITAL

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The Hospital

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SATURDAY, JULY 17, 1909.

REFORM IN THE WEST AFRICAN MEDICAL SERVICE.

THE Departmental Committee's report on the organisation of the West African Medical Service has just been issued, and it contains material for careful consideration on the part of medical school authorities and recently qualified medical men. In the first place, and by way of introduction to their formal recommendations, the committee express the opinion, based upon the evidence which they have received, that medical service in West Africa deserves to be considered by junior medical practitioners as a promising and permanent career. From certain documents submitted to them, and, we may perhaps add, by common consent amongst those who are in touch with the subject, the committee feel quite certain that a different view has hitherto been taken. In accordance with this prevalent idea, young medical practitioners have so far been induced to join the service for a limited period of time only, with the implied suggestion that it would be best for them to leave West Africa before it was too late to set up in practice in England; thus, their retirement, with a gratuity of £1,000 at the end of nine years' service, has been officially, or at least semi-officially, regarded as being in the best interests both of the public service and of the medical officers themselves. The committee dissent from this view. They understand that, after nine years' West African service, a medical officer is not well suited for general practice in the United Kingdom. Moreover, it seems clear that the majority of medical officers already in this service would much prefer not to begin a new mode of professional life after eight or nine years under Government employment, but to make the Colonial Medical Service their career. Further, the committee are strongly of opinion that it is not in the best interests of the West African Colonies and Protectorates that medical men of experience should be removed from the Colonial Service after so short a period as

nine years, of which some six years only have actually been spent in West Africa. They consider—and, general medical opinion will surely agree with them—that the continued presence of medical men trained in the study of tropical disease, and fully acquainted with local conditions, is of immense importance, especially for the elucidation of the problems of preventive medicine in West Africa. They point out that the lack of continuity in administration, acknowledged to be the chief defect of tropical African Government, will tend to increase if experienced officers are encouraged to retire early.

The committee thus base their report upon the view that medical officers should be encouraged to make the West African service their permanent career. Promotion is at present very slow; and officers may remain for years at a salary of £500 a year. The committee are convinced that the slowness of promotion and meagreness of remuneration which exists throughout the West African medical service, are mainly responsible for the discontent in the staff. They recommend that the rates of pay should be improved. A still more important proposal is to the effect that a higher and better-paid rank in the West African medical service should be instituted. This will afford opportunities for the advancement of officers of merit and enthusiasm, who up till now have been discouraged through the operation of a grotesque official misconception. The dangers to health and life said to be incident to a career in this region of the tropics seem to have been magnified unduly into an excuse for prejudicing the welfare and progress of the community, as well as of its individual medical officers. It may have been true a few years ago that after nine years' service few civil officers of the administration were likely to render valuable service by continued residence: and this may have been especially true of

the medical officers, the nature of whose duties required their residence in the districts where sickness, particularly malaria, was most prevalent and most malignant. At that time, say a score of years ago, it is probable that the percentage of those who survived a stay of eighteen years on "the Coast," and lived to enjoy the full pension that could thus be earned, was very small. But the new way of life which has come to be the rule instead of the exception in West Africa has changed all this. Temperance is now the rule instead of the rare exception: sanitation is attended to instead of totally neglected: malaria and other tropical diseases have been shorn of much of their terror: everything, in a word, that is comprised within the science of

tropical hygiene has made such strides that the West Coast is no longer pre-eminently the white man's grave.

The natural consequence is that, after nine years' service, officials are no longer cachectic and fever-stricken shadows, but men in the full tide of vigour and of a ripe experience in their duties: another consequence is that the number of those who retire after eighteen years' service to spend many years of healthy life on very comfortable pensions is steadily increasing. These recommendations will, if carried into effect, both attract a better class of candidate in the future, and ameliorate the lot of those who are already members of the West African Medical Service.

SELF-PROCURED ABORTION.

Two weeks ago attention was called in these columns to the interruption for ten years of the career of a man who devotes a considerable part of his energies to the procuring of abortion by illegal operations. Satisfactory as the facts of his conviction and sentence are, it may be questioned whether the evil wrought by those who carry on these practices is anything like so great as that resulting from the indiscriminate drug-swallowing in which so many women who are, or suspect themselves to be, pregnant indulge with the object of aborting. Such at least is the inference suggested by some most remarkable evidence given at an inquest in Grimsby on July 7. Briefly, a fisherman's wife in that town died after abortion in circumstances suggesting that the cause of death was poisoning by lead, a suspicion confirmed by autopsy. It was proved in evidence that the deceased, who had had three children, had informed her mother that she had decided to terminate her fourth pregnancy by taking drugs, and that the mother had unsuccessfully endeavoured to dissuade her from this course. It is therefore established beyond question that the woman died as the result of the self-administration of lead taken to procure abortion. The doctor who was called in to the case stated in Court that this practice is very common in Grimsby, and is not confined to the working classes; he has himself been called in to as many as five cases within twenty-four hours in which this drug has been used and has brought about the desired effect. It is difficult to conceive the condition of affairs in which one practitioner can be sent for to five cases of procured abortion in one day; even granting that coincidence may have had something to do with so formidable a total, yet the use of lead compounds for the termina-

tion of pregnancy must be rife indeed among the population when such an amazing day's work can confront one man.

In making this experience public the witness alluded in emphatic tones to the fact that the use of lead in doses sufficient to cause abortion is attended by very considerable risks to the mother of insanity, paralysis, anæmia, and kidney diseases; and this point was driven home by the Coroner in his summing up to the jury. It has, unfortunately, become more or less public property that lead compounds in sufficient doses are very reliable abortifacients. What is much less well known to the public is that a dose sufficient to poison the *fœtus in utero* is sufficient also to poison the mother; and that, though it is only in exceptional cases that her death immediately results, yet the other consequences of this method of terminating pregnancy are by no means trivial, but often very serious. Disquieting as the revelations of the medical witness are, it is still more significant that the Coroner stated that many other practitioners in Grimsby have similar experiences to record. That occasional attempts at abortion or suicide should be made by the half-distraught victims of seduction is to be expected as long as human nature remains what it is; but that wholesale self-drugging by an enormous proportion of expecting mothers should be possible without any effort at prevention is both a reproach to and a very serious matter for the State. The moral and economic sides of this question are large and difficult, and cannot now be discussed; but at least it is matter for congratulation that the Grimsby jury did its duty by returning a verdict of *felo de se*. How far this will act as a deterrent to others is a subject for mere conjecture; but it is to be hoped that any good results that follow will not be confined to Grimsby.

ANNOTATIONS.

Poisonous Hypnotics.

THERE comes a period in the popularisation of every hypnotic drug when a knowledge of some of its properties diffuses beyond the members of the medical profession, and its name becomes familiar to large numbers of the lay public. The natural result is a series of fatalities; for even if the claims of manufacturers and advertisers, respecting the superiority of their particular article over all others hitherto produced, were actually realised, the indiscriminate use of excessive doses by those who are totally ignorant of physiology and pharmacology is certain to end in calamities. This stage veronal has now apparently attained. It is widely known as a hypnotic drug which has several advantages, and it is extensively used by patients with or without the consent of their doctor, and often without any pretence at medical supervision at all. The result is an increasing frequency of cases such as that investigated in the Paddington Coroner's Court on July 7, when a verdict of death by misadventure was returned respecting a German gentleman who died after the ingestion of 120 grains of veronal. It was stated that he had previously been known to take 60 grains at a time, a dose four times as great as had been originally ordered by his physician. The latter suggested that the sale of patent medicines of this class should be limited to a single safe dose; it is hard to see how the evil may thus be greatly mitigated, for the determined patient can easily keep accounts open with four different chemists, or, indeed, with fourteen for that matter. We draw attention to this case of veronal poisoning especially, because of the growing number of accidents recently in connection with this drug; even doctors themselves have gone down before it, for it may be remembered that early in the summer a London practitioner succumbed to a fatal dose.

Abdominal Tuberculosis in Britain.

THE strenuous efforts which are being made by a small but energetic band of sanitarians and philanthropists in this country to arouse the nation to a sense of the very serious mortality and morbidity from tuberculosis in Great Britain have more than once been the subject of comment and appreciation in these columns. It is encouraging to notice that opinion abroad, especially in the great English speaking Republic across the Atlantic, is also being favourably impressed by these efforts and their results. At the same time there is evident in several recent editorials in American and German papers a tendency to estimate the frequency of tuberculosis in Britain as very greatly exceeding that elsewhere. Whether this is actually the case is not, perhaps, quite so certain; but whether it is or not, the campaign against this scourge must be carried forward with unabated vigour, and without any slackening until our mortality returns show figures very different from the present. One American writer, Dr. Bovaird, has recently compared the statistics of a number of representative children's hospitals in the United States with those of Great Ormond Street, the Edinburgh Hospital for Sick Children, and the Glasgow

Children's Hospital with regard to abdominal tuberculosis. As a result of a careful comparison of the returns for a consecutive period of years, he comes to some startling conclusions, which certainly seem to be warranted by the evidence on which they are based. Abdominal tuberculosis, clinically diagnosable as such, is fifteen times as common in Great Britain as in the United States. This author, when he visited Edinburgh, was taken over the Hospital for Sick Children, and was shown, he says, by Dr. John Thomson more cases of unquestionable abdominal tuberculosis among children in one morning than he had seen in ten years in New York. An examination of post-mortem statistics reveals a disproportion nearly as great in respect to primary intestinal tuberculosis. This is found in fully 20 per cent of fatal cases of tuberculosis in childhood in this country, but only in 3.5 per cent. in the United States; and similar percentages are reported from Germany and France. Dr. Bovaird correlates with these figures the much greater frequency of bovine tuberculosis as found by English observers compared with the researches of Continental and American authors. If anyone needs convincing of the seriousness of the milk problem in this country he can be recommended to ponder these facts, whose application and moral are fairly obvious.

An Ecclesiastic on Vivisection.

ALTHOUGH we would not willingly fail in respect towards those engaged in the task of promoting morality, yet it must be said that passages in Archdeacon Wilberforce's recent sermon to the Anti-Vivisection Congress seem to us deserving of considerable adverse criticism. A published summary of this deliverance contains the following obviously *ex parte* statement, to characterise it no more harshly. "Evidence was accumulating every day that severe suffering was inflicted upon the human race from the erroneous conclusions produced by experiment on animals." Concerning this it may be remarked, firstly, that not so very long ago an ecclesiastical dignitary of the same name gave vent to some remarkable denunciations of the work of Darwin—work which has just received world wide commemoration; and secondly, that the less unreasonable among anti-vivisectionists must see that, with the leavening of public opinion just setting in as the result of the spirited activity of the Research Defence Society, allegations of this sort are bad tactics. We put the matter thus mildly, believing fully in the maxim that in controversy there is nothing so deadly as the strictest moderation. For indeed, perusal of this homily gives one just about as favourable an opinion of the clerical mind as does, say, perusal of *Barchester Towers*—if by quite different means. Archdeacon Wilberforce predicts that in ten years' time it will be clearly recognised that the golden rule of the medical profession is prevention of disease, and not destruction. In the meantime it would be interesting to learn from the anti-vivisection party how, except by animal experimentation, Koch could have conceived the order to stop the watering carts in Hamburg, and thereby stay a fatal cholera epidemic there.

MEDICAL OPINION AND MOVEMENT.

IN an interesting contribution to the *American Journal of Surgery*, Dr. J. M. Barnhill, of Ohio, discusses Ochsner's Treatment of Appendicitis. He appears to be justified in his supposition that Ochsner's methods of treatment are not properly understood by a certain proportion of the profession, and his authority and records have been referred to in support of non-operative treatment of appendicitis. One of the essential principles of Ochsner's teaching is to operate early; in fact, he adopts the extreme surgical standpoint, that operation should be performed as soon as a diagnosis of acute appendicitis has been made. But he differs from the current textbook teaching in regard to cases which come under treatment after the infection has extended beyond the tissues of the appendix, and especially in the presence of beginning diffuse peritonitis. In such cases he advocates delay in surgical intervention until the patient's condition has been sufficiently improved to render operation safe. He does this because he claims to have medical measures at his command which are able to effect such an improvement and justify delay—namely absolute fasting by the mouth, and rectal feeding and rectal saline injections. In cases of severe vomiting he resorts also to gastric lavage. In all cases of appendicitis he deprecates the administration of food or cathartics by the mouth as long as there is any pain or other evidence of inflammation. Rest being one of the first essentials of treatment for any form of inflammation, everything should be done to ensure absolute rest of the bowel, and so prevent spread of infection. Briefly, therefore, the chief features of Ochsner's treatment are to withhold everything by the mouth and administer food and saline by the rectum, operate in all ordinary acute cases; but when there is evidence of spread of infection to the general peritoneum wait for a subsidence of severe symptoms by the measures above mentioned.

THE use of Ventilators with revolving fans has become very common in large public buildings, especially restaurants and shops. In most cases these ventilators communicate with the outside, and they are installed, of course, with the idea of ventilating and purifying the air within by increasing the rate of exchange with the external atmosphere. But revolving fans are also frequently used, especially in hot weather, simply to produce a cooling effect by setting up a current of air inside. Drs. A. Sartory and A. Filassier have examined the bacteriological effect of these fans and ventilators upon the atmosphere within, and have communicated their results to a recent meeting of the Société de Biologie. They find that these appliances enormously increase the bacterial content of the air. Their experiments were numerous and varied, but it will suffice to refer to one or two. Thus in a restaurant of 400 cubic metres analysis of the air before the fan was working showed 12,500 bacteria per cubic metre; after

working the fan for one hour 23,000 bacteria, and after two hours 45,000 bacteria. In another café of 600 cubic metres the number of bacteria rose from 12,000 to 39,000 after the fan was working for one hour. In every instance, in fact, the number of bacteria per cubic metre was doubled, or even quadrupled. As the authors point out, with these facts such appliances cannot but be regarded as dangerous and detrimental to the public health.

THE favourable results obtained by Electrotherapy, according to the method of Apostoli, in the treatment of hæmorrhage from uterine fibroids have led Dr. P. Galante, of Naples, to try the hæmostatic effects of the electric current in cases of hæmoptysis. He uses a constant current from thirty elements with a galvanometer. A large electrode formed of a disc of zinc, covered with several layers of gauze and saturated with distilled water, is placed on that part of the chest which physical signs indicate to be the seat of the trouble, and is connected with the positive pole of the battery. The negative electrode is placed on the back or some other convenient part of the body. The strength of the current should be 15 to 20 ampères, or, if the electrodes are sufficiently large, as much as 50 ampères may be used. The duration of the application was 10 to 20 minutes. Dr. Galante reports details of two cases successfully treated in this way. The first was that of a young man with a considerable infiltration at the right apex. He had had repeated attacks of hæmoptysis, and finally a persistent hæmorrhage set in, which all ordinary means failed to stop. On the fifth day galvanisation of the chest was carried out in the manner described, and the effect was immediate. The hæmorrhage ceased, and the cough was also markedly relieved. The following day there was again a tendency to hæmoptysis, which yielded at once to a second application. The electric treatment was repeated for two or three days, and there was no return of the hæmorrhage. The second patient, also a man, showed dulness and diminished respiratory murmur over the left lung. For some years the patient suffered from persistent hæmorrhages, which often lasted a month or more in spite of treatment. Application of the current immediately arrested the hæmorrhage and relieved the cough.

ATTENTION has recently been called by Carter Rowley to an early sign of *Tabes Dorsalis* first described by Abadie in 1905, which consists in analgesia of the tendons, and of the tendo Achillis in particular, to pressure. The author finds that absence of sensibility in the tendo Achillis is found in two-thirds of all cases, a proportion which is similar to that of the loss of knee and Achilles' jerks, and the presence of Argyll-Robertson pupils. Analgesia of the biceps tendon is less frequent, but a diminished

sensibility can be frequently made out. Moreover, examination of over 100 normal individuals shows that this bicipital analgesia is frequently present in the healthy. The earlier results of Negro and Racine show that diminished sensibility of the tendo Achillis occurs respectively in three out of ten, and in 17 out of 33 cases of tabes dorsalis, so that this phenomenon of Abadie can be considered as an early sign of the disease, and should be looked for as carefully as the other signs, such as loss of knee and Achilles' jerks, Argyll-Robertson pupils, and lightning pains.

A NEW Method for attempting to secure Sphincteric Control after Colostomy is described in the *Lancet* by Mr. Charles Ryall. The rectus abdominis is split vertically, and the sigmoid is drawn out and divided at a convenient point. The author believes that much of the difficulty in the management of a colostomy opening is due to the bulky spur produced by the older methods, and favours the division of the bowel and the closure of its lower end, which is then returned to the abdomen. The upper segment is then made less bulky by removal of appendices epiploicæ and mesenteric fat; but without in any way interfering with the blood supply. A loop of muscle fibres is then separated from the posterior aspect of the rectus on each side of the wound, and the centre of each strand is drawn across to the opposite side of the wound so that one loop overlaps the other. Through the ring thus formed by the overlapping muscle strands the bowel is passed, and the whole is sutured so as to preserve this disposition. Anchoring stitches are inserted through the skin and muscle inside to keep the bowel in position. The wound is then closed above and below the bowel, and the cut edges of the latter are sutured to the skin. The author claims that by this device a double sphincter is formed, consisting of both longitudinal and circular fibres. The longitudinal fibres are those of the anterior portion of the rectus, and the circular fibres are those of the loops from the posterior portions. A similar operation can be, and has been, carried out through the external oblique; and analogous proceedings are of course quite feasible for gastrostomy and appendicostomy.

THE Parotitis which is especially common in patients suffering from gastric ulcer is dealt with by Drs. H. D. Rolleston and Oliver in the *British Medical Journal*. From an analysis of the records of 1,000 consecutive cases of gastric ulcer treated in St. George's Hospital, they find that whereas in 470 patients treated by rigid oral starvation the percentage of secondary parotitis was 4.5, in 530 allowed something by the mouth—albeit water only in most instances—the percentage of this complication works out at 0.4. Moreover, only about two-thirds of the patients who develop parotitis have suffered actual hæmatemesis, which is therefore held to be of less importance in the ætiology than rigid starvation. Attention is drawn particularly to this because it has been supposed that hæmatemesis disposes to parotitis owing to post-hæmorrhagic leuco-

cytosis and consequent thrombosis. The dry condition of the mouth is thought to be the principal cause of parotitis. This conception does not, however, explain the incidence of parotitis after certain laparotomies, notably ovariectomy and other pelvic operations; for oral starvation can hardly explain these also. The authors conclude that mouth washes do not prevent the occurrence of secondary parotitis. Another of their observations is that the condition is more often unilateral than bilateral. Both these facts would seem to require some explanation which the "dry mouth" hypothesis does not provide.

FOR a long time it has been known that Epilepsy, usually of the Jacksonian type, may occur in the tertiary stage of syphilis. A second and less common type of epilepsy occurring in the secondary stage of the disease also exists, and in the *Gazette des Hôpitaux* Guénot gives an interesting description of such a case. This form of epilepsy closely resembles the essential type except for the absence of the initial cry and aura. Symptoms of "petit-mal" such as vertigo and absent-mindedness, are also lacking. The fits may occur within three weeks of the appearance of the chancre, and often precede the usual secondary symptoms. The number of attacks is very variable, and to a large extent depends on the precocity and intensity of mercurial treatment. One of the best diagnostic points lies in this ready response to treatment, for the fits are definitely curable by mercury and no after effects are left. Prognosis is therefore good, which is in marked contrast to fits as tertiary symptoms, in which it is always grave. The condition is considered by Fournier, who first described it, to be a neurosis, a false epilepsy comparable to other neuroses which are attributable to syphilis. The cerebro-spinal fluid shows no trace of the treponema pallidum, but a slight lymphocytosis such as is found in all cases of syphilis is seen. More important evidence can, however, be obtained by Wasserman's hæmolytic reaction, for, although this reaction is usually positive in the secondary stages of the disease, the author obtained a negative result before the disappearance of the fits. A second test performed when these had ceased proved positive. It is, of course, unfair to generalise from the observation of a single case, but the results obtained by this reaction are sufficiently important to justify further research into the syphilitic nature of epilepsy, and, by repeated examinations at sufficient intervals of time, to follow the course of the affection and control its cure.

CYCLICAL Vomiting in Childhood is an obscure condition of which the published cases have been mounting up of recent years, and the pathology and ætiology of it seem to be still matters of very considerable doubt. Dr. Eleanor Jones reports such a case in the *Archives of Pediatrics* with an account of the findings at autopsy: fortunately not very many of the cases end fatally, and for that reason every one that is followed out completely is, in the present state of our knowledge, worthy of publication. The child, aged three, was in good

health until after partaking of some mutton stew, when he began to vomit at irregular intervals for four days. Then he developed twitching of the extremities and head retraction: combined with obstinate constipation the syndrome suggested tuberculous meningitis, but presently the symptoms, with the exception of vomiting, passed off, and the diagnosis of toxic vomiting was made. Consciousness was not lost, nor was there any complaint of headache; and the knee-jerks were normal. The temperature ranged between 97° and 101° F. The spleen was not palpable, and the abdomen was soft, flat, and retracted. Urine was secreted scantily, and voided involuntarily: it contained no albumin, casts, or acetone. On post-mortem examination almost the only abnormality found was advanced fatty degeneration of the liver, the structure of which under the microscope was almost indistinguishable. In view of the parallel which has been drawn by some authors between this condition of cyclic vomiting and delayed chloroform poisoning, it is interesting to note that in the former as well as in the latter the presence of acetone in the urine is not invariable. Probably both conditions are due to hepatic insufficiency or degeneration; but whether cyclic vomiting is the expression of a derangement of the liver which in those less liable—but still not normally resistant—can be evoked by the toxic effects of chloroform is a question which must remain as yet unsettled.

THE Surgical Treatment of Tuberculosis of the Epididymis and Testicle is considered at length by Dr. C. G. Cumston in the *Annals of Surgery*. This writer formerly upheld the practice of early castration in cases of unilateral infection, in accordance with the view widely held that by this means dissemination of the bacilli to the prostate, seminal vesicles, and the other testicle may be prevented. For the last five years, however, he has abandoned this line of treatment, and is well satisfied with the results which he has obtained by epididymectomy when the testis itself is not involved in the tuberculous process. This latter fact is ascertained by splitting open the organ, and suturing it should it turn out not to be affected. This preliminary exploration of the testis is essential before the epididymectomy is attempted. The author lays stress on the fact that sexual power is not lost in those whose epididymis is affected by tuberculosis, although it may be in gonorrhœal lesions in this situation. He says that recurrence of the disease is no more frequent than when castration is done, and that the influence on the general condition and on the prostate or seminal vesicle if diseased is quite as good. He emphasises his belief that tuberculosis in these situations is in a large proportion of cases local and often presents a tendency to spontaneous cure; even when abscesses and fistulæ have developed it is not uncommon to find the epididymis alone involved.

THE incision advocated is made on the anterior aspect of the scrotum right through the tunica vaginalis to expose the testicle completely. If the testis, when split, appears healthy it is to be sutured at once

with fine catgut, not chromicised. The separation of the epididymis is then begun at its tail, and all that is necessary is to incise the vaginalis both inwardly and outwardly in order to decorticate the organ from the testicle. The epididymis is drawn upwards and peeled off until it is retained only by a few small vessels, the vas deferens, and cellular tissue; this mass is ligatured and then cut. The vas deferens is cautiously snipped, care being taken not to injure the internal branch of the spermatic artery. The wound is drained for two days. Indications for castration are considered to be failure of epididymectomy to cure, and advanced coincident pulmonary lesions. In the acute type of tuberculosis also, Dr. Cumston favours castration, and regards conservative measures as out of the question; immediate and very radical removal is the only treatment which he recommends for such cases.

BITTORF contributes an elucidative article on Pericolitis to the *Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*, founded on a series of cases studied at Prof. von Strümpell's Clinic at Breslau. As early as 1853 Virchow had drawn attention to the frequency of old adhesive patches on the colon, chiefly at the flexures, which are to be met with in a fair percentage of bodies examined post mortem. It remained for Windscheid in 1889 to be the first to describe the clinical aspect of the condition, to which he gave the name Pericolitis. Bittorf argues that pericolitis is a well-marked clinical entity, easily recognisable at the bedside by those who have studied it. It is slightly more common in women than in men, affects all ages and conditions, and is usually acute in its onset. Fever is almost a constant sign, while constipation alternating with diarrhœa is almost the rule; in a few instances rigors have been observed. A leucocytosis may be present, as was found to be the case in the majority of patients examined by Bittorf, and the author lays stress on the increased excretion of indican in the urine. A very constant sign is localised tenderness over the colon, and it is important to differentiate this tenderness from the parietal tenderness in cases of peritonitis. In the latter superficial tenderness exists; in pericolitis deep pressure elicits the pain, which may also be accentuated by the passage of flatus within the lumen of the bowel at the affected spot. Rovsing's appendicular sign may be present, and where the pericolitis affects the ascending colon it may be difficult to differentiate the case from one of sub-acute appendicitis. In the latter and much more grave condition, vomiting and pain, irrespective of pressure, are the main features; the temperature is usually much higher, while the condition of the patient generally is much worse than in pericolitis. It is necessary to bear in mind, however, that the clinical picture of pericolitis may be very closely simulated by appendicitis, even where gangrene exists and the patients are in a very desperate condition. This is a point on which insufficient stress is laid in an otherwise exceptionally good article.

HOSPITAL CLINICS.

DIAGNOSIS OF DISEASES OF THE URINARY SYSTEM.

By J. G. PARDOE, M.B., C.M., F.R.C.S.; Senior Assistant-Surgeon St. Peter's Hospital; Assistant-Surgeon West London Hospital.

(A Lecture delivered at the Post-Graduates' College, West London Hospital, on June 28, 1909.)

THIS afternoon I propose to talk to you about some methods of diagnosis of diseases of the urinary system. Some methods, of course, are perfectly simple and applicable by everybody, but there are others which call for the aid of the skilled diagnostician. Let us begin with the consideration of the diagnosis of certain diseases of the urethra. The most common of all the diseases affecting the urethra is chronic urethritis, and this is the disease which is treated in a more haphazard way than most others; as a rule simply for want of proper diagnosis. The urethra, for clinical purposes, can be divided into a deep and a superficial part, or, in other words, an anterior and a posterior part. Any infection behind the compressor urethræ muscle cannot be cured by the use of ordinary anterior injections with a small syringe. Many of these cases of chronic urethritis are due to posterior infection—infection of the mucous membrane of the deeper urethra, or of the prostate itself. It must be our first object to find out whether the infection is limited to the anterior urethra or has also involved the posterior.

The simplest method, applicable by anybody without special apparatus, is that known as the four-glass test. With an ordinary irrigator can, to which is attached four or five feet of tubing and a proper nozzle, the anterior urethra is thoroughly washed out with sterile water or with boracic solution. In order thoroughly to wash out the anterior urethra sufficient force must be used, but one must be careful not to use too much force. If too much force is employed it will be found that fluid has been sent back into the bladder, thereby vitiating the test. I usually have the patient standing for this test, his trousers down to his knees, and a bowl held beneath the penis. The nozzle is a conical one, so that if pressed into the meatus the meatus is blocked. By means of alternate pressure and release the anterior urethra first balloons and then relaxes. In that way it is wholly flushed out, and the washings are placed in a glass. The patient then passes a little urine which is put into a second glass, and passes a little more which is put into a third glass. We then put the patient in a kneeling position on the couch, and with our forefinger in the rectum massage out the contents of the prostate and the seminal vesicles. After this the patient stands up and passes the urine into the fourth glass. We thus have the contents of four glasses. In the first place, the anterior urethra as far back as the compressor urethræ is washed, therefore the contents of the first glass will be mainly débris from the anterior urethra. In the second glass containing the first urine we shall have anything which comes from the superficial mucous membrane of the deep urethra. The third glass contains the bladder contents uncontaminated from the urethra; and the fourth glass

the bladder contents, together with the contents of the follicles of the prostate and the seminal vesicles. In this way we are furnished with a direct means of ascertaining the extent and depth of the infection.

I am not speaking about treatment this afternoon, but simply about diagnosis. I may say, however, that if there is definite infection of the prostatic follicles, ordinary injections in the penile and bulbous urethra will be perfectly futile. The history of such a case is very common. The patient has had what he calls gleet for a considerable number of weeks or months. After a certain amount of treatment it disappears, but on seminal emission or sexual intercourse the discharge returns. The infection has been carried from the depths of the prostate into the urethra and has again caused catarrhal urethritis. In making an examination it is necessary always to have the patient with a very long retention of urine. The best plan is to prohibit him from passing water when he rises from bed in the morning, so that we have the whole night's urine to go upon. Moreover, he should not have had a motion before coming for examination, otherwise a certain amount of the prostatic contents may be squeezed into the urethra. It is also very important that he should not have had a seminal emission during the night. These little precautions should be observed, or the test will not be satisfactory.

So much, then, for this method of diagnosis in the case of chronic urethritis. It is almost unnecessary to speak about the urethroscope. Chronic urethritis, however, is not always dependent upon an infection of the deep part of the urethra. Many cases are entirely confined to the anterior urethra. Very frequently the cause is infection of the glands of Littre. These may not be felt on taking the urethra between finger and thumb, but the urethroscope will show the glands at once. The glands mature in just the same way as an acne follicle in the skin will mature, forming a kind of boil. One of these small glands comes to a point, ruptures, and the urethra is again infected with gonococci or other micro-organisms. The urethroscope is practically the only means of detecting this condition. In the many cases which have been cured when steel bougies have been used the cure has been due frequently to the rupture of these glands by the large metal instruments, thereby setting free the gland contents and allowing them to heal.

I want now to pass on a little further and consider the diagnosis of some conditions in the bladder. Supposing that we take the cardinal symptoms of urinary disease—pain, connected or unconnected with micturition; frequency of micturition; hæmaturia; and pyuria—all these symptoms, alone or in conjunction, may give rise to a misleading diagnosis. Let me give you an instance. Quite recently I have seen a case of urinary disease which has mimicked a

variety of other conditions and has led to a series of grave surgical mistakes. Twenty-five years ago the patient was delivered of a child under very difficult circumstances and without adequate assistance. She never felt well after the confinement, and particularly felt pain after passing urine. A year or two after her confinement she was operated upon for these pains, and her left ovary was removed. I have no information as to the state of the ovary. The pain still continued, however, and subsequently the right ovary was removed. Here, again, the condition of the ovary is not stated. Seven or eight years ago, still complaining of pains in connection with the bladder and pelvic organs, she underwent an exhaustive examination; another laparotomy was done, and this time the uterus, which was said to be pressing on the bladder, was removed. I have no information further than this, but of course we know that the healthy uterus does not press upon the bladder and cause these symptoms. There was no history of fibroids in this connection. Well, the pains still continued, and the woman resigned herself to endure them to the end of her days, but a year or so ago she felt that they were too much to endure, and again sought advice. They got rather nearer the mark this time, for they said that she had chronic Bright's disease, and must not have anything more done. She had intermittent frequency of micturition; for a week or two the frequency would be very great, and for a further period less so. There was always pain at the close of micturition; never any hæmaturia; slight backache. The cystoscope showed a considerable efflux of pus from the left ureter, and on calling to our assistance the *x*-rays it became evident at once that she had a large stone in the kidney of her left pelvis. This stone I removed the other day, and since then she has had no pain in the pelvis or in connection with her urinary system. One must not be dogmatic in such a case, particularly in the absence of more detailed information, but with this large, slow-growing oxalate stone in the kidney it does look as if, had it been possible to employ cystoscopy and radiography at the beginning, that stone would have been removed, and the patient spared many years of ill-health and pain.

The point of the above case is that renal conditions may simulate bladder diseases, and that bladder disease may simulate renal conditions. And it leads me to the axiom, or the postulate, whichever you will, that no kidney should be operated on until a careful cystoscopy has been made. That is a counsel of perfection, but I always carry it out in my own practice. The instance I have just given was one of a renal stone simulating bladder trouble. Before passing on to consider the bladder I will describe one more case. A young woman, about thirty years of age, came into the hospital with profuse hæmaturia. So profuse was it that she appeared to be almost dying. The bladder filled rapidly with clots. The bleeding was temporarily stopped by ordinary means, and on examination an immense tumour was found in the left loin. The patient had complained of severe pain in that region for three or four months. The natural inference was that there was a rapidly growing malignant growth of the kidney. A cystoscopy

was done and showed a villous growth hanging to a long pedicle attached to the left ureteric orifice. The operation was a dramatic one, for this large tumour acted like a pricked bubble; there was an immense gush of urine which overflowed on to the table and the floor when the villous growth was removed, and the kidney tumour immediately went down. Without the cystoscope that kidney would have been operated on and probably removed, and nothing whatever would have been done to the villous tumour.

There are certain conditions in which the use of a cystoscope is essential. One of these lies in making a right choice for the treatment of stone in the bladder. Everyone is agreed at the present time that the operation of choice for treatment of stone in the bladder is litholapaxy—i.e. crushing the stone and removing the fragments at one sitting. Litholapaxy is an easy operation under favourable conditions, when the bladder is not contracted and the stone not too large, and when there is no interference from stricture of the urethra or great enlargement of the prostate. But where any difficulties are present the young litholapaxist may be better advised to do the ordinary supra-pubic section and remove the stone through an incision. Litholapaxy, moreover, in some cases presents serious dangers if a sacculus is present, and the stones are in the sacculus, or, it may be, in the bladder, covering up the sacculus to some extent. Sacculi have an unpleasant habit of opening at about the base of the bladder. Let us suppose that a sacculus has its opening between the two ureters. A fairly big stone may form in certain bladders, resting at the base, and may be caught in the lithotrite and found to be perfectly movable in the bladder. That stone is crushed and the sharp and jagged fragments drop into the sacculus, and the evacuator fails to suck them out. Ulceration is set up and the course of events is sometimes very tragic.

There is a difference between an acquired sacculus and a congenital one. The acquired sacculus is usually due to straining or back pressure in making urine. In this way a sacculus is gradually formed, the wall of which is merely mucous membrane with a little fibrous tissue. A congenital sacculus, on the other hand, may be a kind of accessory bladder. Into an acquired sacculus with its thin mucous membrane wall fall fragments of stone. A lot of urine leaks out, and a serious condition is set up. The recurrence of grave symptoms after an apparently successful operation is a great disappointment to the surgeon. After the straightforward litholapaxy the patient is put back to bed and for a day or two is quite comfortable. Then he begins to complain of deep pelvic pain, and within a short time there is rigidity above the pubes, generally on the right side, pain down the leg following the course of the anterior-crural nerve, a dry tongue, and perhaps a rigor. I have seen this accident occur eight times altogether, so that it cannot be called an uncommon one. Two of the cases were my own, and both recovered, but only after a most serious illness, enormous incisions, free drainage, and a very long convalescence. Of the other six cases four recovered and two died. Therefore this is a

serious complication and a distressing and calamitous one. I am thus led to lay down the rule that no stone should be crushed in the bladder until after a careful cystoscopy, wherever that is possible.

Perhaps the most important revolution in the diagnosis of urinary conditions has been in surgical conditions of the kidneys. This has been brought about by the use of two instruments—the intravesical segregator and the catheterising cystoscope. The most striking results have been gained in connection with tuberculosis of the kidneys. The statistics given by Israel, of Berlin, in the latest edition of his book show the immense progress which has been made in renal surgery since the introduction of these careful, systematic methods of diagnosis. In the first place we have to ascertain in many cases which kidney is diseased, if, indeed, both are not affected, and in the second place we have to make sure whether the kidney which is apparently not grossly diseased is of sufficient functional activity to carry on the needs of the body when the other has been removed. If in any case diagnosis of an accurate nature is required, it is in tuberculosis of the kidneys. The introduction of an ordinary examining cystoscope into the bladder will enable the surgeon to gain sufficient experience to appreciate the character of the efflux from either kidney with very little practice. When severe disease is present the pus is sometimes so thick that when squeezed from the ureteric orifice it is like lanolin from a tube. At times it is not so thick, and in certain cases the efflux stops during cystoscopy—a most annoying thing. Apparently the very act of passing instruments into the bladder inhibits the stream from the kidneys; therefore we either segregate by the segregator or by the passage of the ureteric catheter. I much prefer the latter method.

In addition to these we have other methods at our command which tell us of the functional activity or competence of the two kidneys—namely chromatocopy and the production of artificial diabetes. In the first method one uses either methylene blue or indigo carmine. By giving the patient two or three grains of methylene blue in pills at intervals of several hours before the operation, or by injecting it hypodermically half an hour before the examination, the urine from normal kidneys is deeply and equally tinged with the pigment. But in the case of an incompetent kidney the colour is either exceedingly pale or is entirely absent. This is a most valuable method, because sometimes a kidney which is discharging quite a clear stream of urine to the eye is anything but competent for its work, particularly in tuberculosis. I remember a somewhat tragic case which instanced the truth of that most plainly. A youngish woman had tuberculosis of the bladder, and obvious discharge of pus from one kidney. Her clinical history was that she had first of all suffered from pain in one lumbar region, corresponding to this pus-discharging kidney, and then her symptoms of bladder trouble developed. The kidney was removed by nephrectomy. Well, she never passed any more water, or, at least, she passed very little, and lived the usual ten or twelve days with complete suppression. At the post-mortem examination her other kidney was found to be grossly infected with tubercle which had not broken down. The whole pelvis was studded

with minute tubercle. My experience of the methylene blue test in such a case as that leads me to believe that if it had been done the side where the nephrectomy was carried out would have shown no trace of the pigment, and the other side a very slight trace.

The other method is more difficult—the estimation of sugar artificially produced by the hypodermic injection of phloridzin. The matter is too long to be entered into in detail, but the fact remains that the sugar recovered from healthy kidneys is practically constant on the two sides, whereas even a small interference with the functional activity of the kidney greatly influences the output of sugar.

Another important point in connection with this diagnosis of urinary disease is the question of bacterial infections of the urinary system. Too frequently one hears the diagnosis made of cystitis—cystitis pure and simple. Having said that, the presumption is that all has been said that needs to be said. Nowadays we are not content with that, and we have to call bacteriology to our aid. Of late years a very great variety of bacterial invasions of the bladder have been recognised and adequately treated. Instead of saying, "Yes, that is a cystitis; let us wash it out for local treatment and give urinary antiseptics for general treatment," we now find out the particular micro-organism concerned and treat the case accurately. A case in point is the infection with bacillus coli, and a very great distinction must be drawn between the acute coli cystitis and the chronic one. Acute infection with bacillus coli very often follows an attack of influenza, and a pure culture of coli is found to grow from the urine. In such a case local interference is very inadvisable. The catheter should not be passed, but the patient should be put to bed and given hot baths and urinary sedatives, and as a rule he will come right. Vaccine is of no benefit in such cases. But in other patients, who come with a story of years of suffering and infection of urine, the case is different. Though they may have tried every drug from A to Z, yet the urine is still cloudy, and one commonly finds a mixed infection of bacillus coli accompanied by staphylococcus or streptococcus. In such cases one can sometimes remove the infection of the secondary organism, whereas the coliform infection persists, and then vaccine sometimes does enormous good.

Tuberculosis of the bladder is one of the most insidious diseases we know. It commences so very quietly, so little alarm is caused. Possibly some undue frequency of micturition is the earliest symptom. The patient does not notice it during the day, but he does notice it at night; he may have to get up once or twice in the night for that purpose, even in warm weather. In such a case as that the urine may be very nearly or quite clear; there may be no blood or pus to the naked eye, but if the urine is carefully examined bacteriologically it will very often reveal the presence of acid-fast bacilli. It is not uncommon for the first hint of the condition to be given by the examination for life insurance. I had such a case the other day. It was that of a doctor who went to be examined for life insurance. It was rather a strict examination, and they noticed—what he had never previously noticed—that his urine

was a little muddy-looking. He asked a colleague to examine it, and definite tubercle bacilli were found. There were no symptoms of any kind whatever. He went to a sanatorium, had treatment with tuberculin, put on nearly two and a half stones in weight, and then returned to work. Almost immediately he had a fresh invasion of tubercle, and a nephrectomy was

done. He had been passing plenty of tubercle bacilli in the urine and knew nothing whatever about it. Therefore, I insist that when cystitis is obviously going on a bacteriological examination should be made. It will at least give timely warning of the necessity for surgical or other treatment.

THE CEREBELLUM.

BY SIR VICTOR HORSLEY, F.R.S., F.R.C.S.

(A Brief Abstract of the Cavendish Lecture delivered to the West London Medico-Chirurgical Society on June 25, 1909.)

THE conception of the cerebellum as an organ governing and co-ordinating the muscular response to stimuli received through the sensory nerves was originated by Willis in the seventeenth century. Experiments upon animals have shown that, unless the cerebellum is intact, running and walking, and even standing, are impossible. The automatic function of standing involves extension, of which the newly born of most mammals are incapable. The new-born infant and the new-born kitten can neither of them stand because they have not the necessary power of extending their limbs. In the new-born kitten a section of the cerebellum shows that the molecular layer is still quite embryonic: the Purkinje's bodies are there, but the cells of the molecular layer over the whole of the cerebellum are in an embryonic state.

At the same time we do not stand up wholly through the existence of our cerebellum, nor does any other animal. We stand erect upon our hind legs, and we do so by means of the extensors of the knees, hips, and ankles chiefly. There are other important centres besides those of the cerebellum concerned in this. Galen recognised that the spinal cord of a lower animal is a mass of centres. This was first demonstrated experimentally by Munk, and Sherrington has shown the details of how this function is subserved. It is the afferent impulses brought to the cerebellum through the various spinal centres which enable the standing position to be maintained without effort. It is often said in text-books that the ataxia of the tabetic is due to sclerosis of the posterior columns of the cord. But it has been shown that in animals both the posterior columns can be cut across without any ataxia resulting: ataxia always results when the posterior nerve-roots are cut.

To pass from standing to walking, we still really walk with all four legs: the swing of the arms alternates with that of the legs, which Dr. Hughlings Jackson, the father not only of British neurology, but of all neurology, calls the alternation of corresponding opposites. This is, of course, because we are each of us two individuals joined together in the middle line.

If you stimulate the region of the thalamus to which the superior cerebellar peduncle is distributed, you get a movement of progression. Dr. Jackson published an article in *Brain* two years ago, illustrated with drawings by Dr. Mackenzie of an extreme and untreated case of post-basis meningitis.

These drawings may some day possess a historic interest, because in the future it may not be possible to see such cases of extreme cerebro-spinal meningitis: the patients will be treated and cured before they reach such a condition. These drawings show, besides head retraction, the alternating extension and flexion of the arms and legs, as in the act of walking. If we consider running, which is nothing but exaggerated walking, the alternation of corresponding opposites is shown extremely well, as, for instance, in a photograph of the finish of a running-race.

On stimulation of the whole cerebellum the effect produced upon the eyes is one of conjugate deviation. Turning to the labyrinth and semi-circular canals, the special afferent apparatus of equilibration is found. It is not a static apparatus, but is constructed wholly upon the idea that movement is going on. The movement of the fluid in the canals produces a purely mechanical stimulation of the cells.

The "cerebellar" attitude of the head, so often of use in the diagnosis of cerebellar disease, should really be called the "vestibular" attitude, for it is, I suggest, really due to lesions of the labyrinth. This is not in any way to detract from its value as a sign in cerebellar cases. As a rule the head in this condition inclines to the affected side: unfortunately there are exceptions to this, and some of them have lately been creeping into text-books as the usual rule instead of the exceptions to it. If you remove the labyrinth in mammals, the result is always inclination of the head to the side of the lesion.

I wish to conclude with one observation on the question of the localisation of function in the cerebellum. Is there any evidence that one part of the cerebellum is more connected with any one function, say that of walking, than is another? It has been suggested that by observations on the anatomy of the cerebellum in various kinds of animals, in some of whom the hind legs are better developed than the forelegs, or *vice versa*, it may be possible to assign to the divisions of the cerebellum control over definite regions of the body. In my opinion, such an application of anatomy to the deduction of physiological function is quite unjustifiable. There is, however, one division of the cerebellum, the vermis, which is certainly connected anatomically and structurally with the spinal cord. Disturbances after lesions of different parts of the vermis are due to disturbances of the intrinsic nuclei of the cerebellum. But to deduce the minute localisation of function in this part of the brain is at present, I think, a mistake.

MEDICINE.

ASCITES—VI.

THE DIFFERENTIAL DIAGNOSIS OF THE CAUSE OF ASCITES (*Continued*).

(c) *Tuberculous Peritonitis*.—This disease is the commonest cause of ascites in children. There are several varieties, which may be classified according to the morbid changes found in the abdomen. Ascites may be found with each of these forms:—

(i) The peritoneum, both parietal and visceral, may be studded with tubercles which are often most numerous in the flanks and on the under surface of the diaphragm. The abdomen becomes uniformly distended, partly as a result of ascites, and partly from tympanites. The symptoms of this form of the complaint may be acute or chronic.

In the acute form there is abdominal distention, pain, and tenderness; the temperature may rise to 104° F.; the pulse becomes rapid, and the condition may be mistaken for acute suppurative peritonitis. The onset, however, is seldom so acute as in acute peritonitis due to appendicitis or to perforated gastric ulcer, and the abdominal pain and tenderness are less marked. When the onset is not quite so acute, and the illness begins with a general feeling of malaise, abdominal discomfort, distension, pain, and tenderness, with pyrexia, and a pulse-rate above normal, it may be difficult to distinguish it from typhoid fever. In both diseases there may be leucopenia, and the spleen may be moderately enlarged.

The pulse-rate will probably be a useful clinical guide, for this is not so rapid as would be proportional to the temperature in typhoid fever. For instance, with a temperature of 102° F., the pulse-rate would very likely be only 90 in the earlier stages of typhoid fever, whereas, with the same temperature, it might well be 110 or more in acute tuberculous peritonitis. If the presence of free fluid in the peritoneal cavity can be determined it would be very important evidence in favour of tuberculous peritonitis and against typhoid fever. In the more chronic forms, in which the abdomen gradually increases in size and the chief indication of disease is the presence of ascites, it may be either very easy or very difficult to make a correct diagnosis. The condition is constantly being mistaken for cirrhosis of the liver on the one hand and for ovarian tumour with secondary peritonitis upon the other. The frequent association of tuberculosis with chronic alcoholism increases the difficulties of diagnosis in adults.

(ii) The omentum may be contracted and thickened as a result of tuberculous infiltration and caseation, so that it gives rise to a hard tumour lying transversely across the abdomen above the umbilicus in such a way as to simulate an enlarged liver. From the latter it may often be distinguished by the presence of a resonant percussion note between its upper limit and the costal margin. In some cases the edge of the liver may be felt above it and distinct from it. This variety may also be mistaken for malignant peritonitis; but as a matter of fact a thickened omentum is commoner in tuberculosis than in cancer.

It may, however, be mistaken for a liver studded with large umbilicated secondary nodules.

(iii) The intestines may be matted together, and the adhesions thickened and infiltrated with tuberculous deposits. In consequence, the peritoneal cavity may be divided into loculi, some containing fluid. In encysted ascites of this kind the distension is often asymmetrical.

(iv) The mesentery may be thickened and contracted, the intestines being fixed to the posterior part of the peritoneal cavity. The abnormal and atypical physical signs that may arise in consequence of this have already been discussed. The abdomen may be uniformly distended and dull to percussion; occasionally a large, hard, irregular, deeply situated tumour may be felt, perhaps by dipping.

(v) The mesenteric glands may be enlarged and caseous, with irregular shaped tumours palpable in the posterior part of the abdomen. Abdominal pains, chronic pyrexia, and wasting in a young subject may be the only evidence. Ascites is by no means a constant, nor even a common, feature of this form of tuberculous peritonitis.

(vi) Occasionally local thickening of the abdominal wall may be felt, due to subperitoneal inflammatory and tuberculous infiltrations. This causes a hard rigid feeling in the abdominal parietes, like firm local contractions of the recti.

There may also be redness and cedema for some little distance around the umbilicus, and even a purulent or fæco-purulent discharge from it. When present these are very characteristic of tuberculous peritonitis. Wasting and diarrhoea are apt to occur, and there may be co-existent pleurisy.

(d) *Cancerous Peritonitis*.—Cancerous peritonitis occurs most frequently in women over 40 years of age. It is usually secondary to cancer of the stomach, ovary, intestine, or other abdominal viscus. The omentum may be thickened and infiltrated with the new growth, and large nodules may develop all over the peritoneum. The chief indications of the presence of this disease are ascites, emaciation, anæmia, and cachexia. If the amount of fluid is large, nothing definite in the form of nodules or tumours can be made out on palpation, on account of the tenseness of the abdominal wall. After paracentesis abdominis it may be possible to feel nodules and masses varying in size and form. Roughly speaking, such multiple nodules in the abdomen in a patient past middle life indicate malignant disease, whilst similar nodules in a child point to tubercle. In many instances the ascitic fluid may contain an appreciable amount of blood. This is always suggestive, though not quite pathognomonic, of growth. It is when no primary growth is known of that the difficulties occur. The state of the left supraclavicular glands may sometimes give the clue. The umbilicus may be infiltrated with growth, becoming hard, fixed, and much thickened. This condition is almost pathognomonic.

THE ZITTMAN TREATMENT OF SYPHILIS.

THE essence of the treatment of syphilis advocated by Zittman appears to be prolonged diaphoresis and diuresis, brought about by drinking large quantities of highly-spiced liquids and by being kept in a room at a high temperature. It has been employed for certain cases at Netley since 1904, and Major Lawson gives an account both of the treatment and of its results in Vol. xii. of the "Journal of the Royal Army Medical Corps." It has been contended that it is particularly useful for patients who have already undergone a course of mercurial treatment, but who are, nevertheless, uncured; it is argued that the Zittman treatment assists in setting free the mercury that is already stored up in the bones and elsewhere in these cases. It is, therefore, to be employed in later rather than in early syphilis. Patients suffering from severe rashes, rupia, ulceration of the skin, bone affections, gummata, destructive lesions of the nose, and syphilitic rheumatic pains in the limbs and joints appear to benefit much, whereas affections of the mucous membranes do not seem to yield to this treatment in the same way.

Major Lawson reports that, notwithstanding the considerable discomforts that attend it, the course is very popular amongst the soldiers, who have the greatest belief in it and frequently ask to be put down for a second course. In many cases there is a loss of weight at first, but during the six weeks afterwards this loss becomes a gain. The chief difficulty in the treatment is to keep the room at the high temperature and yet ventilate it sufficiently.

The course lasts fifteen days. On the evening before it is begun the patient is given two pills according to the following prescription:—

R. Hydrargyri subchloridi ... gr. ii.
Extracti Colocynthis compositi ... gr. v.
Extracti Hyoscyami ... gr. ij.

Misce. Fiat massa. Divide in pilulas duas.

He is ordered a free diet from which Zittman recommends that sugar and spices should be excluded,

though this is not found to be necessary at Netley. He is kept in bed except for an hour in the evening, and the temperature of the room is maintained at 80° F. at least—better still at 84° F. or 85° F.

For the first four days the patient drinks half a pint of the following decoction as hot as possible, at 9, 10, 11 a.m., and 12 noon:—

DECOCTION No. 1.

Rad. sarsæ contus.	...	...	...	3iv.
Sem. anisi contus.	...	...	...	gr. lxxx.
Sem. fœnic. contus.	...	...	...	gr. lxxx.
Foliæ sennæ	...	...	...	3j.
Rad. glycyrrh. contus.	...	...	...	3iv.

Add in a linen bag—

Sacch. alb.	...	...	...	gr. lxxx.
Alum. sulph.	...	...	...	gr. lxxx.
Hydrarg. subchlor.	...	...	...	gr. lxxx.
Hyd. bisulph. rub.	...	...	...	gr. xx.
Aquæ	...	...	...	gals. iij.

Boil down to one gallon and strain.

On the same day, at 3, 4, 5, and 6 p.m., he drinks half a pint of the following decoction cold:—

DECOCTION No. 2.

To the dregs of No. 1 Decoction add:

Rad. sarsæ contus.	...	...	...	3ij.
Cort. limonis contus.	...	...	...	3j.
Sem. cardam. contus.	...	...	...	3j.
Rad. glycyrrh. contus.	...	...	...	3j.
Aquæ	...	...	...	gals. iij.

Boil down to 1 gallon and strain.

On the fifth day the patient gets up, and in the evening he has two more pills. The treatment is repeated till the fifteenth day, when it is discontinued, and the patient returns to a ward at the usual temperature.

If diarrhœa results it will be found that the straining has not been carefully attended to, calomel being thereby allowed to pass into the decoction. As a matter of fact, calomel is practically insoluble, and the red bisulphide almost so; consequently the decoction contains next to no mercury, and equally good results have been reported when all mercury has been omitted from Decoction No. 1.

BUTTERMILK FOR URTICARIA IN CHILDREN.

MUCH is being written just now upon the subject of lactic acid bacilli in the treatment of gastro-intestinal diseases such as colitis; and there are many who hold that special preparations made by acting upon milk with particular cultures of micro-organisms—notably the Bulgarian bacillus—are essential to success. Whether or not these specialties are required in the treatment of some cases, there can be little doubt that ordinary buttermilk with its mixed micro-organisms is of great value in the cure of many minor ailments. We refer, of course, to fresh buttermilk, or buttermilk which is not so soured as to be absolutely difficult to swallow. Fresh buttermilk is very palatable, at any rate to adults and older children; and although it may have to be specially ordered, it is usually obtainable even in large towns, if the dairyman is asked to obtain a daily supply of it.

Skin eruptions in children are frequently due to gastro-intestinal troubles; urticaria is familiar in this respect, and even severe dermatitis is sometimes seen. A mixture containing salol, together with a mild laxative, may suffice to cure the condition some-

times; but when a case is met with in which the cure is less easily effected, possibly because of persistence of the intestinal cause, it may be worth while to prescribe buttermilk—a tumblerful or more during the day for an adult, less for a boy or girl. The results obtained have been excellent, and the cure has often been rapid and complete. When there has been diarrhœa and decomposition of the fæces the stools have become regular and have lost their fœtid smell; the intense irritation of the skin diminishes and then disappears. When there has been more than urticaria, a general eruption, which might be classified by some as a dermatitis, by others as an eczema, a cure has been obtained in periods varying between twelve days and four weeks. The buttermilk acts, apparently, by acclimatising harmless lactic acid bacilli inside the bowel, with consequent inhibition, or even cessation, of the growth of less harmless bacteria. There is no danger, and the treatment may be continued for a long time. It is, of course, a return to an old-time custom when buttermilk was freely drunk by those who lived in the country.

SURGERY.

THE SIGNIFICANCE OF PERI-RENAL SUPPURATION.

A PERI-RENAL abscess is not in itself a clinical entity. It should be regarded rather in the light of a symptom manifesting itself in the course of disease attacking the kidney itself or some adjacent, or even remote, viscus; in other words it is almost always a secondary phenomenon, and a primary focus should be sought for.

It is, of course, often connected with disease of the kidney itself; and there may be found a fistulous track leading from a septic focus in the kidney to the areolar connective tissue which surrounds the organ; but, in other cases, no such macroscopic communication can be found, the infection having spread through an apparently intact renal capsule. The commonest renal condition which may cause a peri-renal abscess is a renal calculus, round which a small focus of suppuration has made its appearance.

When the disease starts in the kidney the diagnosis is not likely to be difficult, because attention is already focussed on that organ by the original symptoms of the calculus: thus blood and pus will have been found in the urine, and the presence of a calculus may already have been demonstrated by means of *x*-rays. What is difficult to know is the exact moment at which the suppuration has extended from the kidney into the peri-renal tissues. But then, again, this is not a point of great clinical importance, since an operation is demanded as soon as the existence of a calculus pyonephrosis has been made certain, and to postpone an operation at that time would be bad surgical practice.

But there are also a number of conditions, starting in organs remote from the kidney itself, which may give rise to a peri-renal abscess; and in these the exact diagnosis may give rise to greater difficulty because no indication of disease may be given until an abscess has formed round the kidney. The most prominent of these are conditions connected with the alimentary tract. First and foremost comes suppuration in connection with the appendix. When an abscess forms in or round an appendix which lies retrocæcally it may make its way upwards behind the ascending colon, lying entirely behind the peritoneum, and the abscess may eventually surround the kidney, and if left point in the loin. Or again a gastric ulcer may slowly leak and form a peri-gastric abscess which will spread into the peri-renal tissues, and an abscess in connection with malignant disease of the ascending or descending colon may do the same thing. Of the remoter causes an empyema which makes its way through the diaphragm, and a parametric abscess which spreads up behind the posterior layer of the broad ligament are the commonest.

The symptoms which distinguish a peri-renal abscess, apart from those due to the primary disease, are a constant dull pain in the affected loin with pyrexia, and those general manifestations that one associates with a collection of pus locked up in the body, namely malaise, anorexia and headache. On examining the abdomen the muscles of the affected

side are found to be held somewhat rigid, and there is tenderness on palpation. A mass may or may not be felt, but its outlines are never definite, because the pus is contained in a loose areolar space, in which it can spread with comparative ease. There is often œdema of the skin of the corresponding loin, but hardly ever, except in the latest stages of an untreated case, a red fluctuating swelling. For it must be remembered that the pus is deep to the deep fascia, and as long as that is so, those cardinal signs of acute inflammation, redness of the skin and the presence of a fluctuating swelling will be wanting. This is equally true, whatever part of the body is affected. Thus a patient may have a deep popliteal abscess, but it is only when the pus has made its way through the deep fascia that a red, fluctuating swelling will be found.

There are, however, two symptoms which, though not constantly observed, are, when present, highly suggestive. One is flexion of and the other is œdema in the corresponding limb. The flexion is, of course, easily explained. It is due to an irritative contraction of the psoas muscle, which lies directly behind the kidney. The œdema is due either to pressure on the common iliac vein by the abscess, or to thrombosis set up by the adjacent suppuration.

In the early stages the treatment is usually confined to symptomatic remedies such as local counter-irritation by the application of hot fomentations to the loin and antipyretic drugs; and the common teaching is that no operation should be performed until it is certain that an abscess is present. If, however, there is any doubt as to this, the casting vote should, in the writer's opinion, always be given in favour of operation. Œdema of the loin should be regarded as a positive indication for surgical interference. For then it may be confidently predicted that even if pus is not actually found at the operation, it will make its appearance at an early date. At the operation an attempt should always be made to investigate the origin of the pus; so that it may be known what measures, if any, must be taken subsequently. At the first operation all that is necessary is to provide efficient drainage. For this purpose one or more large india-rubber tubes should be inserted into the wound, which should be partially sewn up. If adequate drainage is provided the condition should gradually clear up whether the original cause was appendicitis or empyema; and when the discharge has diminished or ceased the removal of the appendix or resection of a rib can be considered later.

On the other hand, the consequences of postponing surgical interference when an abscess has once formed may be grave. For the pus will surely spread along the lines of least resistance, either backwards into the loin, downwards into the pelvis, or upwards into the lesser sac of peritoneum, or even through the diaphragm, and so cause an empyema where none was before.

GYNÆCOLOGY.

DIAGNOSIS AND TREATMENT OF PYOMETRA.

PYOMETRA, or the accumulation of pus in the uterus, is not common, but when present it causes very unpleasant symptoms, and may be a sign of carcinoma in the lower uterine segment. It is not, however, invariably accompanied by cancerous growths, and its treatment then may be a simple matter.

As a rule the first indication of pyometra is a most offensive purulent vaginal discharge either as a gush or as a slow constant trickle. The offensiveness of the discharge usually calls the patient's attention forcibly to it. In some cases the pus is not discharged, but remains pent up in the uterus; and this is especially the case in cancer of the cervical canal or lower uterine segment. Under these circumstances the presence of a pyometra is not always diagnosed, but is discovered for the first time during the operation for removal of the cancerous uterus.

The pathology of pyometra is interesting, for in none of these cases is there any real obstruction to the outflow of pus; the cervical canal is not actually closed as a rule, but will readily admit a sound. The pus accumulates in the uterus because the uterine muscle degenerates in old age and is replaced largely by fibrous tissue. Thus when pus is secreted by the endometrium, instead of being forced out by uterine contractions, atmospheric pressure and the narrow uterine canal combine to prevent its egress, just as fluid will sometimes remain in an inverted narrow-necked bottle. Then, as more pus accumulates, the fibrous uterine wall distends and dilates, so that even as much as half a pint or more fluid may be accommodated in the uterus. Sooner or later, however, an overflow takes place, either in a gush or in a slow continuous trickle. One is apt to forget that fluids do not readily at any time flow out of the uterus, but must be forced out by uterine contractions. This is the case not only with pus, but also with menstrual secretions and lochial discharges. Practically pyometra can only occur in elderly women whose uterine muscle has degenerated and become incapable of expelling the contents of the organ.

The direct causation of the pus secretion must be infection of the endometrium, in the majority of cases favoured by the presence of a cancerous growth. That it may occur in the absence of a cancer cannot be denied, but the number of recorded cases is limited. Senile endometritis is a condition more often talked of than seen, but it does occur, and very remarkable changes in the endometrium accompany it. As a result of atrophy plus infection the glands of the endometrium disappear, or are destroyed, and the mucosa becomes converted into an inactive form of granulation tissue, secreting pus, but showing very little tendency to heal and cicatrise. The lining of the uterus presents a worm-eaten appearance, brownish in colour, and showing microscopically capillary loops, leucocytic infiltration, and, in fact, the usual appearance of granulation tissue. In cases without cancer there is very little bleeding, only an occasional streak of blood accompanying the purulent discharge.

In the presence of a cancer, bleeding is a much more prominent symptom, the pus, as we have already seen, being often pent up in the cavity above the growth.

The presence of pus in the uterus is sometimes accompanied by a marked toxæmia, leading to rises of temperature, drowsiness, and other cerebral symptoms; but generalised septicæmia is almost unknown, because the disease is well localised to the uterus, and the granulation layers form a good protecting barrier against general infection. The diagnosis is sometimes difficult, because there is often a senile vaginitis along with this condition, which by itself may set up a purulent, offensive discharge. Senile vaginitis may exist alone without pyometra, and is usually accompanied by the formation of granulation tissue at the vaginal roof, leading to stenosis of the vagina. Such a condition often gives rise to streaks of blood in the discharge, but is readily distinguished from cancer by passing the finger, when the surfaces will separate, and inspection with a speculum will reveal granulation tissue and not new growth. It must not be forgotten that a new growth may exist above the stenosed portion of the vagina. Senile vaginitis is usually readily cured by antiseptic injections, which, of course, have no influence on pyometra.

The diagnosis of a pyometra may be made quite certain by passing two or three Hegar's dilators; the cervix when thus opened up allows the escape of some at least of the pus from the uterus. If there is a cancerous growth present the dilators can hardly be used without free bleeding, but in the absence of a growth there may be little or no blood. If a growth is suspected, but cannot be seen, the careful use of a curette after dilatation of the cervix will surely bring away some fragments whose nature can be verified without mistake by making microscope sections. There is great danger of perforating the uterus with the curette in these cases, for the walls are often very thin, and are always made more soft than usual. The curette therefore must be used with great caution. In the presence of a cancer naturally the only treatment is removal of the uterus, and the operation of choice will usually be by the abdominal route, for by this means the uterus can be lifted out without soiling the operation field, if Wertheim's method of clamping the vagina and cutting below the clamps is used.

If the vaginal route is chosen the uterus should be washed out first through a small Bozeman's catheter with an efficient antiseptic, and the cervix afterwards closed by transfixing it with a thick piece of silk and tying it tightly round. Where no growth is found, pyometra may be successfully treated by washing out the cavity with an antiseptic and then draining it by a rubber tube fixed *in situ* by a stitch through the cervix. If this tube is left long enough to protrude from the vulva the uterus may be washed out daily without disturbing the patient. As these patients are often aged this last is not an unimportant consideration.

ORTHOPÆDICS.

SPRAINED ANKLE—II.

THE treatment of a simple sprained ankle, when once a more serious lesion has been definitely excluded, is mainly directed towards improving the local reaction which is Nature's own superior way of dealing with the condition. The orthodox method of treatment was, and in many quarters still is, to prescribe complete rest, with cold lotions applied over the part. "A wet handkerchief, a bowl of cold water, a sofa, plenty of light literature, and a well-aired room"—this summed up the essentials of treatment as many understood it. No doubt this line of treatment has its good points. It is true the cold water compresses do not assuage the pain of the sprained ligaments so quickly and completely as do hot boracic lotion poultices, while complete rest again is by no means advisable in every case. The simplest cases got well without any bad result under this treatment; but they would have got well equally quickly if left to Nature herself without any interference from the practitioner. The more severe cases, on the contrary, did not do so well. The writer has had occasion to examine a series of patients who had had severe ankle sprains some years ago, and who had been treated on the usual lines "with complete success." On examination, in nearly every case some degree of flat-foot or some difference in the originally injured foot was observable, directly traceable, certainly in the majority of cases, to the original injury.

We have long held it as an axiomatic truth that complete immobility in the case of fractured bones is not conducive to quick and strong union. Cases are not unknown in which ambitious surgeons have so capably wired together a fractured long bone that no movement was possible between the apposed ends, with the result that no union occurred until the wires had been taken out, and the bone ends permitted to rub against each other. Excessive movement is, of course, incompatible with quick union, and apparently equally incompatible is excessive immobility. A slight degree of irritation is necessary to stimulate a tissue to growth. This we have learned by experience is the case in long bones, and later researches have demonstrated that it is equally the case with other tissues. A muscle, for example, that is subjected to slight movement repairs its rents much more permanently and much more securely than one which has been absolutely immobilised. This has been shown to be the case in wounds of the diaphragm, a muscle which is continually in action, and it is no doubt true of ligamentous tissues as well. It is therefore open to question whether complete rest is the best treatment in cases of sprain. Nor can it be held that passive movement in the shape of massage is an adequate substitute for the natural movements which occur at the seat of injury. Massage should be started much earlier than active movement, but should never be allowed, even from the first, to replace active movements made by the patient himself.

Having carefully examined the case and satisfied himself, as far as it is possible to do so, that the lesion is a simple one, uncomplicated by fracture or dislo-

cation, the practitioner should treat it as such. A simple boracic lotion compress, put on moderately warm and changed every four hours, acts excellently in relieving pain and diminishing swelling. In an ordinary case this is all that is required in the way of applications, and in every case it is useful to commence the treatment with such compresses repeated three or four times. Rest from active exertion should be enjoyed, but passive and voluntary movements should be commenced at an early stage, and the patient must be encouraged to put in action the calf muscles by alternately flexing and extending the ankle. At first this series of movements must be very cautiously performed, and will probably give rise to some pain. It should be helped by gentle massage, the hand of the operator being anointed with an emollient cream. Emulsions and liniments in themselves do not materially hasten the cure of a simple sprain, but they are useful, in so far as they give the patient an impression that more is being done for him than is actually the case—a satisfactory delusion when the innate faith of the public in embrocations, liniments, and ointments is borne in mind. What undoubtedly does good is the massage, and this may be done as effectively with simple olive oil. This massage, together with the boracic fomentations, rapidly relieves the pain, which even in a simple sprain is often very severe, and in a week's time the patient is usually able to go about. Treatment by massage must, however, be persevered in till all stiffness and feeling of soreness about the site of the lesion have disappeared.

Where complications exist or are suspected, these must be the primary consideration. With the more serious, such as fracture and dislocation, it is unnecessary to deal here: their existence removes the case from the category of sprains. Superficial wounds and scratches, which are by no means unusual in sprain cases, should be treated by boracic fomentations if there is any suspicion of sepsis. This is especially advisable in the case of club patients and poor-class patients generally, who may be wearing cheaply-dyed stockings, the dye of which may act as an irritant, and in some cases may lead to much distress. Such superficial abrasions are troublesome, as they interfere with proper massage; where they are so extensive as to make rubbing an impossibility for the first few days, passive flexion and extension movements, and massage of the calf and shin muscles, must be commenced from the first. An unpleasant and distressing complication is tenosynovitis, generally of the plastic variety. This may affect the flexor or extensor tendons, but appears to be more frequent in the Achilles tendon and the peronei. Counter-irritation may be used to treat it, but the writer has never found this of much service. In any case, the plasters should be small—of the size of a threepenny bit—and applied not only over the actual site of the lesion, but a few inches higher up along the course of the tendon. Boracic fomentations, and in a few cases cold compresses, do more good in such cases of tenosynovitis than any embro-

cation or liniment, besides being much more comforting to the patient. One of the best methods of treatment, in every way worthy of a trial in private practice, is by means of a Bier's bandage. This is applied high up over the thigh, just below the groin, and left on for eight or more hours. It acts magically in some cases, all the pain, discomfort, and crepitation disappearing under the hyperæmia.

Later sequelæ should never be disregarded, and it is as well for the practitioner to examine his cases a month or six weeks after he has written them off as cured. The slightest tendency towards flat-foot should receive immediate attention, and a celluloid

or cork inset, properly modelled to fit the arch of the foot, should be worn. Passive and active movements should be continued in such a case, but the ordinarily prescribed "foot" exercises which are supposed to "strengthen" the arch may be omitted, as they are hardly likely to benefit the case, and often do more harm than good. Other sequelæ, such as arthritis and neuropathic joint in a tabetic patient, can hardly be guarded against except by careful attention from the first time the case is seen. Immobility or limitation of movement, however, are preventable sequelæ, and should never follow an even bad sprain if the latter is properly treated.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

ALARMING SYMPTOMS AFTER A DOSE OF ASPIRIN.

By J. E. BULLOCK, M.D.

ABOUT 8 P.M. the patient (male, aged 48) took a powder containing 10 grains of aspirin; within a quarter of an hour he was seized with violent itching all over the body, chiefly about the head, which he scratched vigorously. The skin felt burning hot, and tight from intense cedema; and, more especially about the face and neck, it felt drawn up into tight cords. The tongue swelled so that speech was indistinct, and there was also marked swelling of the eyelids. A sense of great oppression was felt round the throat and over the chest, the latter resembling the tightness of asthma (to which the patient is subject); he felt as if he were dying of suffocation, and he was quite unable to speak.

When a doctor arrived, in about twenty minutes, the symptoms had subsided, so that the fear of impending death was removed. The patient felt hot and was beginning to perspire, and soon most of the cedema had disappeared; the most distressing symptom then was the intense thumping of the heart, which continued several hours and prevented sleep.

When I saw the patient early next morning the only evidences of what he had gone through were some congestive blotches about the neck and an itchiness of the skin; there was no feeling of nausea, but for a day or two the appetite, which previously had been good, failed, and the bowels were unusually constipated.

The powder containing the aspirin had been obtained from a well-known and reliable chemist, and no suspicion can be attached to its composition; three powders were obtained at the same time, and one had been taken by another person with no ill effect. No alkaline medicine or mineral water was being taken by the patient. The patient states that a few years ago, after taking one tabloid (presumably 5 grains), he was seized with similar symptoms, though in a much less degree; the symptoms then resembled acute urticaria, to which the patient is subject.

Two cases have previously been recorded* in

which similar symptoms occurred. In the latter case the patient had taken soda water, which is known to break up aspirin into sodium salicylate and acetate. Aspirin is insoluble in the gastric juice, and it is not until it reaches the alkaline intestinal juices that it liberates salicylic acid. The symptoms in the cases recorded occurred within a few minutes of the powder reaching the stomach, and there was no evidence of salicylism (tinnitus aurium, delirium, or gastric disturbance).

In my case the aspirin had no effect on the neuralgia for which it was given, and I can but attribute the symptoms to a peculiar idiosyncrasy of the patient, by which an immediate hyperæmia of the whole system was brought about. This is in accordance with the views of Klemperer,* who ascribes the relief given by the salicylic preparations in acute rheumatism to a general hyperæmia, especially affecting the joints. I shall be glad to hear if others have known instances of alarming symptoms after aspirin, and if any explanation can be given.

* *Therapie der Gegenwärtig*, 1907.

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* *British Medical Journal*, Oct. 3 and 10, 1908. Pp. 1052 *et seq.*, and pp. 1140 *et seq.*

"THE HOSPITAL"

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TUBERCULOSIS.

RATIONAL IMMUNISATION IN THE TREATMENT OF PULMONARY TUBERCULOSIS AND OTHER DISEASES. By E. C. HORT, B.A., B.Sc., M.R.C.P. (London: John Bale, Sons and Danielsson, Ltd. 1909. Pp. 75. Price 3s. 6d. net.)

THE first main point upon which Dr. Hort insists is that we are all of us, nowadays, far too apt to think that the symptoms of any particular microbial disease are due to the bacteria or to their toxins. Dr. Hort would have us remember that the way in which many of the symptoms arise is by no means directly from the microbes or from the microbial toxins, but rather from abnormal or toxic substances produced by our own tissue cells as the result of the action of the bacteria upon the latter. In other words, in addition to any symptoms that may be due to the bacterial toxins, there are other symptoms due to our own abnormal tissue-toxins. Now modern vaccine treatment is directed almost entirely against the microbe or against the microbial toxin. No effort is being directly made to combat the toxins that are produced by the tissue cells that the microbes have attacked and damaged, and the opsonic method, quite apart from any intrinsic defects, is bound to be absolutely misleading. A rise in the opsonic index is at most an indication that the power of resisting the microbe in question is increasing; though even this conclusion is open to dispute. Of the many other points that Dr. Hort makes, we will mention only that which concerns evening-temperature charts. Dr. Latham has shown that the temperature charts in cases of tuberculosis afford most valuable evidence as to the good or bad progress of the case—evidence that can be relied upon more safely than can opsonic index counts. This is doubtless because opsonic counts afford evidence upon one point only—namely the power of the leucocytes to engulf the bacteria. The patient's temperature, on the other hand, affords a measure of the net result of many different internal processes, including the actions both of bacterial toxins and of human-cell toxins. The book is well worth reading and studying; we only wish it were a more convenient shape, possessed an index, and had its title lettered upon the back so that one could see the name when the book is on its shelf.

TUBERCULIN IN DIAGNOSIS AND TREATMENT: a Text-book of the Specific Diagnosis and Therapy of Tuberculosis for Practitioners and Students. By Dr. BANDELIER and Dr. ROEPKE. Translated from the second German edition by E. C. MORLAND, M.B., B.Sc., Lond., M.D. Berne. (London: John Bale, Sons and Danielsson, Ltd. Pp. 182 + vi., with coloured plate and charts. Price 7s. 6d. net.)

ALWAYS the chief argument of those who advocate the routine use of tuberculin in tuberculosis is the fact that well-known workers like Trudeau, Turban, and Moeller have

stated that patients thus treated show years afterwards better results than others. What receives too little of their attention is the extent of precaution taken against fallacies. One finds in this work, as usual, all the *pros* and very few of the *cons*. Competence in interpreting statistics being granted (rather a large admission), what of the guarantees that the use of tuberculin was the only varying factor? Certainly the clinical material of Drs. Bandelier and Roepke is not such as to afford a test, since they expressly stipulate for selection of cases. Bad general condition, pyrexia, severe mixed infections—all these things are held to contra-indicate the use of tuberculin. And the *naïve* statement—"We have repeatedly observed a pulse-rate of 120 in the minute fall steadily to 80 in the course of six months" shows how curiously blind to the possibility of the best known of fallacies can be those who speak justly of medicine as an applied science, and have, besides, long experience of the natural remissions of consumption. This criticism, however, apart—and no sweeping condemnation of tuberculin treatment is intended—we cannot but praise this book highly. As the authors point out, its value lies in its universality. The ground indicated by its title has been covered thoroughly, with full cognisance of the multitudinous results obtained in this field by Continental workers, and of the theories upon which such work is based. This being so, some detailed mention of the authors' conclusions is called for. Profiting by the early errors of their master Koch, they are all for the mild, or "reactionless," method of tuberculinisation, beginning with 1000 milligram of new tuberculin (bacillary emulsion), not going beyond 10 milligrams; by "reaction" they mean not only slight pyrexia—which should be avoided—but even mere headache and lassitude. Individual variations in susceptibility must be carefully studied. Subcutaneous administration is the only useful method. As regards diagnosis, they condemn the ophthalmo-reaction as dangerous (in ocular disease), and also, on the testimony of several observers, as untrustworthy. On the other hand, they think highly of v. Pirquet's skin reaction, and of subcutaneous injection. But here again they fail to point out that the scope of the latter means of diagnosis is much limited, since pyrexia contra-indicates it; and also that for the humiliating reason that ease of application has caused the ophthalmo-reaction to be more used than v. Pirquet's test, the former has had a more exacting trial. Dr. Morland's translation is above the usual level although (perhaps through conscientiousness) out-of-the-way words are occasionally used and German constructions retained. He states that discretion was given him to add material suitable for an English edition—i.e. a criticism of opsonin treatment in pulmonary tuberculosis. Although he has good warrant for doing this, he shows wisdom in refraining.

DISEASES OF THE HEART.

GRAPHIC METHODS IN HEART DISEASE. By JOHN HAY, M.D., M.R.C.P. (Oxford Medical Publications. London: Henry Frowde, and Hodder and Stoughton. Pp. xviii and 184. Price 7s. 6d. net.)

THE work of Dr. James Mackenzie upon the heart and the discoveries he has made by the use of simultaneous sphygmographic records from the radial pulse, the jugular vein in the neck, and possibly also from the cardiac impulse and from the liver, have become so well known that one has hitherto expected to hear of these things almost solely from him. He now has a number of disciples, however, and some of these disciples are beginning to write upon their master's subject. It is contended that whereas sphygmographic traces from the radial pulse are of little value, much clinical information may be obtained by the multiple simultaneous records we have just mentioned. This may be so, but our own impression is, that whilst such records certainly have led to valuable scientific discoveries, and may continue to lead to others equally valuable, the procedure, no matter how carefully its details may be explained in a book like the one before us, must remain too complicated for use in general practice. Moreover, the discoveries made by the methods seem to us to be much less of clinical and practical importance than they are of scientific interest, at any rate at present. We should be very sorry if there were no workers who, using either Dr. Mackenzie's own larger book, or this abstract of it—which is what Dr.

Hay's work amounts to—did not continue the scientific discoveries which Dr. Mackenzie and his pupils have been making; for out of them in time to come concrete and practically useful deductions will be drawn; but much as we regret saying so, we feel sure that the methods employed must be those of the few rather than those of the generality of practitioners. In Dr. Hay's book, after preliminary chapters upon some anatomical considerations of the heart and vessels, he passes on to a detailed account of the polygraph and other instruments; describes normal sphygmograms and their interpretation, devotes a chapter to the auricular type of venous pulse, another to the various types of extra-systole—the auricular extra-systole, the ventricular extra-systole, and the nodal extra-systole; and then discusses disturbances of the functions of the heart under the headings of Disturbances of Conductivity, Disturbances of Excitability, Disturbances of Contractibility, of Stimulus Treatment, and of Tonicity. He next deals with the difficulties in interpretation of sphygmograms, difficulties which may puzzle even the most expert; and finally ends with an illustrative case and a fairly good index. The diagrams in the work are excellent, and so also is the printing, as it is in all the Oxford Medical Publications. We only regret that the publishers have not made their books all of uniform size, for at present they vary so much that they have to go upon different shelves of one's bookcase.

TROPICAL MEDICINE.

JAMAICA. Annual Report by the Superintending Medical Officer, together with the Reports on the following departments of the Medical Service of the Island, namely, the Public Hospital, the Lying-in Hospital, the Lepers' Home, and the Lunatic Asylum for the year ended March 31, 1908. (Jamaica: Government Printing Office, Kingston.)

THE above gives a good idea of the type of Report published annually by many of the different British Colonies. It shows that the bulk of the work is not specially concerned with tropical diseases, but with many of the ordinary conditions and complaints prevailing at home. Tubercle, for example, is common, and seems to be on the increase, and Dr. Kerr remarks "this foul disease is very prevalent indeed, both among those who live in towns and those who live in the country." Dr. Gifford also draws attention to the prevalence of phthisis in Kingston. He states: "It seems almost incredible that no other single disease is responsible for as many deaths in Kingston as phthisis. When we consider that Jamaica possesses one of the healthiest climates in the world, and is being advertised and vaunted as a health resort, we are bound to admit that our sanitary measures require serious revision. Our general hygienic arrangements must be at fault. Food, clothing, and housing all require improvement; that the two former are to some extent factors in the incidence of phthisis may be admitted, but I feel certain that it is to the third, improper housing, especially overcrowding, that the high percentage of pulmonary diseases is mainly due; and I am further of opinion that we shall never make any headway in the reduction of the prevalence of pulmonary tuberculosis until our whole system of housing the poor is recast." Dr. Gifford might also find it useful to study the milk supply of the town, testing the cattle with tuberculin, for example, to see what percentage are infected. Of epidemic diseases chicken-pox, influenza,

malaria, measles, mumps, scarlet fever, typhoid fever, and vomiting sickness prevailed. The etiology of the latter is obscure. Two cases of blackwater fever were reported from Spanish Town. Fortunately the dreaded scourge of the West Indies—yellow fever—did not appear, and the only way to keep that disease in abeyance is to show no relaxation, but rather to stiffen the quarantine laws. One can hardly credit the statement on page 250 that a sum of £150 only has been voted on the estimates for 1908-9 for the equipment of a bacteriological laboratory at the hospital, and a sum of £100 as remuneration to the medical officer appointed to carry on this research work. One would advise the Government of Jamaica not to undertake the scheme at all rather than to do it in this inadequate manner. A properly equipped central bacteriological laboratory for the West Indies generally, to which each colony would subscribe, would perhaps be the best thing, but this would fail, of course, when urgent examinations such as for diphtheria are required. In the district reports Dr. Moseley rightly calls attention to the danger of the introduction of hydrophobia from America. A law should be passed at once to regulate the importation of dogs.

THE THIRTY-SEVENTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD, 1907-1908: SUPPLEMENT CONTAINING THE REPORT OF THE MEDICAL OFFICER. (London: Darling and Son, Ltd. 1909. Pp. 456. Price 3s. 2d.)

THE volume consists of three parts, namely, first, a digest of the detailed reports and papers in the other two parts; secondly, a series of sixteen official reports upon subjects varying from the sanitary circumstances of different boroughs to the progress and diffusion of plague and cholera respectively throughout the world in 1907; and thirdly, a series of six papers upon original work done by medical men to whom grants for the purpose of research have been made by the Local Government Board.

NURSING AND ALLIED SUBJECTS.

HANDBOOK FOR MIDWIVES AND MATERNITY NURSES. By COMYNS BERKELEY, M.B. Cantab., M.R.C.P. Lond.; Obstetric Physician to the Middlesex Hospital and Senior Physician to the City Road Lying-in Hospital, Surgeon to the Chelsea Hospital for Women. New and enlarged edition. (London: Cassell and Co., Ltd. Pp. 303.)

We congratulate the author that his belief in the utility of this book has been justified by the demand for a second edition, and we agree that the addition of appendices on Cancer of the Uterus, the Revised Rules of the Central Midwives Board, and the Rules in force at the City of London Lying-in Hospital add to the value of the book. Although realising that the book as a whole is a fair *résumé* of what the midwife should know, there are many small details which we consider should not pass uncriticised. The advice as to the general hygiene of pregnancy is good, but we do not consider spirit and water a good application for the nipples, for, by hardening the surface, it must predispose to cracking. We cannot but protest against the advice that the membranes should be ruptured in accidental hæmorrhage. It may be sound treatment if good contractions are present; but otherwise it renders abortive the modern treatment by vaginal plugging, and we should expect a fatal result if the case was one of concealed hæmorrhage. We should have liked to see some more definite instructions given so that the midwife might know when the placenta has left the uterus in the third stage of labour. This is the essence of the proper management of

the third stage. The author's explanations of the mechanism of normal labour are very inadequate, and in attempting to be brief he has failed to make himself clear. We cannot believe that extended legs cause impaction of the breech because the head cannot enter the brim with the legs alongside of it. Impaction of the breech occurs long before the head is anywhere near the brim. We should have thought the splinting action of the legs in preventing lateral flexion was much nearer the truth. The chapters on the infant are well done on the whole, but we notice that the midwife is advised to send for a doctor if bleeding occurs when the cord separates. We quite agree; but some instructions should be given showing how hæmorrhage may be arrested in the meantime, for the infant may bleed to death before the doctor's arrival.

SYLLABUS OF LECTURES ON HOME NURSING. By A. BIRCH. (London: The Scientific Press, Ltd. 1909. Price 6d. net.)

HOME nursing is now a subject recognised by all county councils as suitable for Educational Extension lectures. The handy syllabus contained in the publication under notice is one that has been actually in use as the basis of such a course of thirteen lectures. The brief notes and headings into which the matters dealt with are arranged are eminently calculated, as the author intends, to assist both the lecturer in delivering the lecture and the student in expanding and writing up her notes. To each and all of those who attend home-nursing classes in either capacity this inexpensive pamphlet can be strongly recommended.

EUGENICS.

PARENTHOOD AND RACE CULTURE. By C. W. SALEEBY, M.D. Pp. 300. London: Cassell and Co., Ltd. Price 7s. 6d. net.)

HOWEVER deeply we may appreciate the essential soundness of a campaign against the carelessness and neglect which are too often associated with motherhood and child-nurture, we must strongly deprecate the presence of a number of offences against good taste, and of a still greater number of offences against good English, in a work which aims at the removal of social evils and the betterment of the race. We feel that Sir Francis Galton, for instance, would prefer not to be described in the dedication as "the august master of all Eugenists," and that the various authors whose books Dr. Saleeby recommends are better without his ludicrous introductory puffs. If Dr. Saleeby could have cleared his mind of pose and his pen of "journalese," the present volume would be a useful, if unoriginal, contribution to sociology. To say that his work is based upon the idea of *selection for parenthood*, which idea he very gener-

ously fathers upon Charles Darwin, seems to us ill-advised. "Every generation is epoch-making," is typical of the sententious epigrammatic phrases with which this book is so lavishly decorated. There can be no doubt about the necessity for "serious investigation of the facts of death-rate and birth-rate." It is quite possible, if not quite probable, that the unfit, from the national point of view, are increasing more rapidly than the fit, and a movement for ascertaining how far facts bear this out is to be welcomed. But we cannot help feeling that the method and manner of this work will not inspire confidence in the author amongst the thoughtful and educated sections of the public, or draw serious attention to the problem. The division into theoretical and practical eugenics is lucid and sound. The subjects discussed are well chosen and certainly important. But we must repeat that the method and the style are, in our opinion, deplorable. It is not unfair to describe the book as an "olla podrida" of other men's work and other men's ideas, selected and arranged by the active brain and decorated by the facile pen of Dr. C. W. Saleeby.

MATERIA MEDICA AND THERAPEUTICS.

SOUTHALL'S ORGANIC MATERIA MEDICA. By JOHN BARCLAY, B.Sc., F.C.S. Revised and enlarged by E. W. MANN. Seventh edition. (London: J. and A. Churchill. Price 7s. 6d. net.)

THE publication not long since, by the Pharmaceutical Society, of the British Pharmaceutical Codex has to a considerable extent removed the necessity for other text-books and practical works upon materia medica, so that although, when it was first brought out in 1874 by Mr. Southall, the work before us was of great value to medical students and practitioners and pharmacologists, we cannot help thinking that this usefulness has now been to a considerable extent superseded. Nevertheless, no work upon the subject being

perfect, there is probably room for all, and the arrangement of this volume and its limitation to organic substances are sufficiently characteristic to make us think that the book will be particularly useful to teachers of pharmaceutical subjects and to pharmaceutical and medical students.

HOW TO CUT THE DRUG BILL. By A. HERBERT HART, M.D. Pp. viii.+47. (London: John Bale, Sons and Danielsson. 1909. Price 2s. 6d. net.)

We do not like the style of this publication. It is possible that of the many prescriptions in it some may be very useful, but we have so little to say in favour of the pamphlet as a whole that we prefer to refrain from criticising it in detail.

MISCELLANEOUS ITEMS.

THE INTERPRETATION OF RADIUM. By FREDERICK SODDY, M.A. "The Progressive Science Series." (London: Murray. Pp. 250. With illustrations and index.)

THIS book contains the substance of six free popular experimental lectures delivered at the University of Glasgow in the year 1908. It is not too much to say that Mr. Soddy has produced a work which is admirable in every way. It is written in an easy, lucid style, and is free from a wealth of technical detail, with which the layman cannot expect to make himself acquainted. The first chapter deals with the phenomenon of radio activity. The eighth chapter discusses the parentage of radium, the intermediate chapters dealing with α β γ rays and the radium emanation. The sequence is logical and sound, in fact, the arrangement of the book could not be bettered, when we consider that it is essentially popular. Mr. Soddy, however, does not confine himself to mere exposition of incoherent and unco-ordinated fact. He explains how radium seems to be an exception to our established theories of the dissipation and conservation of energy, but that in reality, "though the facts of radio-activity are revolutionary," the old hypothesis can be adjusted to embrace the theory without serious distortion. Mr. Soddy is exceptionally modest over the part which he himself has played in the experimental, as well as the theoretical, side of the study of radium. The details which he gives of the delicate experiments by which the α atoms can be counted indicate the great difficulty in research of this kind. We are grateful, too, to Mr. Soddy for a reference to older theories without the usual contemptuous sneer.

THE FRONTIERSMAN'S POCKET-BOOK. Compiled and Edited by ROGER POCOCK. (London: John Murray. Price 5s. net.)

IN issuing this manual under the title selected, Mr. Pocock inevitably challenges comparisons with the celebrated pocket-book upon which a good deal of Lord Wolseley's military reputation was founded. There is the essential difference that this text-book for the compleat frontiersman is the work of sixty or seventy different authors, most of whom are acknowledged as experts in some particular branch of the subject. This subdivision and specialisation is called for by the great diversity of the frontiersman's spheres of activity and training; he is expected to recognise the nationality of any given warship, and even what her armament is, to make himself equally at home and efficient in the tropics or the Arctic ice, to reduce a dislocation, or pack a transport mule, or sail a boat. The medical sections for the use of those who are not within reach of a doctor are, on the whole, good. This part of the book extends to fifty-five pages, and is the work of several authors. Probably it is in places a little too ambitious, even allowing for the practical acquaintance with some of the commoner injuries and diseases which every old frontiersman picks up. Thus it is hardly worth while to attempt a description of the symptoms and treatment of dislocation of the hip within the compass of thirteen lines. There are a few more instances in which too much has been attempted; but, on the other hand, there are very few paragraphs indeed to which any exception can be taken on the score of inaccuracy. The section on artificial respiration for the apparently drowned follows the old Silvester routine; this might well be displaced in future editions by an account of the Schäfer method. In the treatment of malaria no mention is made of an initial purge as an important aid to quinine medication. The paragraph on veld sores is unsatisfactory; of the two remedies suggested the second is by far the better, but there are refractory cases which require antiseptic

baths and fomentations. It is perhaps scarcely the function of a medical journal to criticise frontiercraft as laid down by experts. But it may not be impertinent to remark on the very high standard of excellence of this pocket-book, which contains within reasonable compass a quantity of information astonishing in variety and value. It may be supposed that the author who recommends boiling to rid clothing of lice has had occasion to try it; but certainly on the high veld it is of no use, perhaps because water boils at lower temperatures in high altitudes. Another practical point, possibly considered too elementary to need mention, is to place a camp kitchen or fire to leeward of all tents, especially when the grass is dry. But we repeat that, page in page out, "The Frontiersman's Pocket-book" is thoroughly admirable.

THE CLIMATE OF STRATHPEFFER. By H. W. KAYE, M.D. Oxon. Pp. 64. (London: Swan, Sonnenschein and Co., Ltd.)

AFTER dealing as a whole with climate and its factors, meteorological and general, the author treats of the climate of Strathpeffer in particular. He supports, from meteorological observations extending over thirty-five years, the contention that the general characteristics of the climate of Strathpeffer are, mildness and equability, without extremes of heat or cold; relative dryness; with absence of strong winds; great purity of air, and long summer and short winter days. He recommends the place as a health resort to those suffering from chronic metabolic disorders, anæmia, chronic rheumatism, chronic lung troubles (especially emphysema), and many types of surgical tuberculosis. The best weather is experienced between April and the end of October.

WASTAGE OF CHILD LIFE. By J. JOHNSTON, M.D. Edin. The Fabian Socialist Series, No. 7. Pp. 96. (London: A. C. Fifield. Price 6d. paper; cloth 1s.)

WRITTEN from a frankly socialistic standpoint, this little volume deals briefly with the many problems which affect the birth, upbringing, education, and surroundings of the Lancashire slum child. Few, however, will dispute the author's opinion that many of the existent evils are the result of parental ignorance, intemperance, and improvidence. Few will disagree with him in condemning the half-time system, with its consequent stultification of the child-mind at the most receptive and impressionable period of its existence. It is only when he proposes the substitution of State for parental responsibility that he is likely to meet with serious opposition. The volume can be recommended to all who wish for a concise and readable account from a definite point of view of a great social evil.

GOLDEN RULES OF ANÆSTHESIA. By R. J. PROBYN-WILLIAMS, M.D. (Bristol: J. Wright and Company. Third edition. 1909. Price 1s.)

MUCH as there is to be said against the distillation of medical lore into such very concentrated essences as "Golden Rules," it is to be frankly conceded that in Dr. Probyn-Williams' hands the process is less objectionable than could be thought possible. It is true enough that only practice and intelligent study of actual administrations can make a man into an anæsthetist; but the last-year student who remembers and obeys the very explicit rules of anæsthesia set down in this pamphlet will be, at least potentially, an anæsthetist of much more than average capacity. That those for whom it is designed appreciate this is sufficiently attested by the appearance of this, the third edition.

POST-GRADUATE MEDICAL SECTION.

THE IDEAL GRADUATE STUDY INSTITUTION.—WHAT GERMANY HAS DONE.

II.—THE "KAISERIN FRIEDRICH ENDOWMENT."

THE rapid development of the work of the Central Committee, the increase of its activity, and concomitantly, the enlargement of the State Collection of Demonstration Specimens, necessitated a better organisation and a larger and more permanent central domicile than the Committee possessed. The Committee was already in receipt of an annual grant from the Kultus ministerium, and it was decided, in consultation with the ministerial representatives, and upon the instigation of Professor Kutner, to establish a bureau and a permanent home for the collection, and in view of the interest which her late Majesty the Dowager Empress Friedrich had shown in the movement for the promotion of graduate study, it was unanimously decided that this building should be called the "Kaiserin Friedrich Haus." Early in March 1903 the president of the Committee, the late Excellenz Professor von Bergmann, was received in audience by his Majesty the Emperor, and presented the plan of the proposed building with a short exposition of what was suggested. His Majesty was graciously pleased to approve of the specifications, and a few days later, in a letter to Professor von Bergmann, formally accepted the patronage of the institution and expressed his gratification at the desire of the Committee that it should be associated with the name of the late Dowager Empress. On March 7, 1903, the Committee met at the Kultus ministerium and discussed the question of ways and means. It was resolved not to formulate a general appeal, as had been proposed at first, in order to obtain funds for the building and endowment of the institute, but to work privately, and, as a primary essential, to form a strong building committee consisting of those present with power to co-opt more members. Professor Dr. Althoff stated that he had already been promised a sum of £10,000 by a friend in aid of the building fund, and, cheered by this encouragement, the Committee set to work actively and at once. There were two examples to encourage it further. Thus, in America, the New York Post-Graduate Medical School owes its existence to private munificence, while in Russia the fine institutes for post-graduate study associated with the name of the Grand Duchess Helena Paulowna, at St. Petersburg and Moscow, had also been founded, and to a large extent endowed, by private benefactors. It is true, these institutions were not planned on quite so large a scale as this proposed Kaiserin Friedrich Haus, which was to serve not only as a monument to the generosity and interest of the late Dowager Empress but which was to be worthy of the large organisation which had been developed during the past few years and worthy the dignity of the medical profession in the German Empire. But what had been done in America and Russia could surely be rivalled in Germany, unless the medical profession and its friends were too lukewarm to make the attempt, and that no member of the Committee was unpatriotic enough to believe. The result has proved that this trust of the Committee in the solidarity and active interest of the medical profession was amply justified. By the end of May 1903—thus barely three months after the initial meeting—more than £50,000 had been subscribed, and with this it was decided to start building operations. Subscriptions came from all quarters, and it is satisfactory to note that those who responded best to the appeal (which, in accordance with the original resolution, was made privately) were the members

of the medical profession, though the large manufacturing firms and several wealthy laymen contributed generously, while his Majesty the Emperor showed his active interest in the movement by becoming one of the donors to the fund. With the approval of the Emperor the Committee decided to use the money so collected to found the "Kaiserin Friedrich Endowment for the Promotion of Graduate Study in Medicine," the objects of which were primarily to build a central domicile for the State Collection, which would at the same time serve as a central bureau for the organisation. As formulated in the original "charter" the Endowment is constituted as follows:

"It is under the direct patronage of the Minister for Education, and its management is vested in a curatorium composed of ordinary and honorary members. Each donor to the fund (by donors being meant those who have subscribed 10,000 marks towards the endowment) is an ordinary member, and a list of such donors is inscribed on a marble tablet in the hall of the institute. The other ordinary members of the curatorium consist of the executive of the Central Committee, two representatives of the Minister for Education, and a representative of the University of Berlin. Honorary members are such persons as in the opinion of the curatorium may have worked in the interests of post-graduate study and by their writings or actions contributed to its advance and progress. From the members of the curatorium are chosen, every three years, a chairman, a vice-chairman, a secretary and a treasurer. As at present constituted the chairman is Wirk. Geh. Rat. Dr. Von Bitter, the vice-chairman Geh. Kommerzienrat E. von Mendelssohn-Bartholdy, the secretary Professor Dr. R. Kutner, and the treasurer Consul-General R. von Mendelssohn. At present the only two honorary members are Dr. Studdt, ex-Minister for Education. The general meeting of the curatorium takes place annually on the anniversary of the birthday of the late Dowager Empress Friedrich (November 21), when the annual report is presented." With this report we will deal later on.

Having formulated the rules and regulations, the committee, or, as one should now style it, the curatorium, proceeded to carry out the design. An excellent site was fortunately available, namely, a corner block on the Luisen platz, fronting the Platz itself and lying alongside Hannover Street. This, almost an ideal site, as it was central and close to the main hospitals, was acquired at a cost of 689,000 marks, and the building committee accepted the original plans which had been approved of by the Emperor. Building operations were commenced in July 1904, and in March 1906 the Kaiserin Friedrich Haus was formally opened. The total cost, including purchase of the original site, taxes, specifications, furniture, etc., was approximately £55,120. The surplus of the collected funds was used as the nucleus of a permanent endowment. A certain amount had been spared by the munificent donations of instruments, furniture and apparatus presented to the institution by various firms and private benefactors. Before proceeding to the detailed description of this interesting institution, it may be instructive to give a short account of the present financial position of the "Kaiserin Friedrich Haus," and to show how it is kept up. The revenue of the institution is derived from four main sources, irrespective of occasional subscriptions and donations. These main sources are (1) the annual grant

made to the institution for the upkeep of the State Collection by the Kultus ministerium; (2) the annual income derived from the rental of exhibition spaces in the permanent exhibition rooms; (3) rental accruing from occupied houses belonging to the institution on Hannover Street, standing on the block purchased and not used for the building, and (4) interest on the nucleus of the permanent endowment fund. From these sources the institution derives an average annual income of 43,000 marks, and as at present the annual expenditure is calculated at 40,000 marks the institution may be regarded as thoroughly successful from a financial point of view.

But financial success is not the only, nor indeed the main point that is necessary to ensure the complete success of such an undertaking. Were the interest of the mass of the profession wanting, the institution could not be said to be a success, and it is satisfactory to note that this interest is maintained and is daily increasing. The house on the Luisen platz is a centre for medical Germany. Once within its doors, the practitioner feels that he is in his own domain. This is his palace; here lie his interests, here is the centre for his graduate study. To a very large extent this success is due to the unflinching courtesy and consideration of the staff. This institution, in fact, is more than German; it is in a sense international. Go up to the bureau, no matter from what part of the world you come so long as you are a medical practitioner, you will be treated as a colleague and a brother, and patiently and impartially you will be informed of any course you may be interested in. The Committee is making strenuous efforts to render its information authentic and complete, and we would earnestly urge post-graduate institutions in England to enter into regular correspondence with the institution, to exchange information with it, and to become acquainted with its work. Only by so doing can we hope to reciprocate the services which the institution has rendered and is daily rendering to English and American graduates in Germany. With the development of the activities of the Committee it became desirable that the institution and especially the Central Committee should have an organ or journal of its own, in order to publish periodical lists of its courses, and so keep practitioners informed of the work that was being done on their behalf. The need for a paper, such as *THE HOSPITAL*, which should appeal in the first place to the busy general practitioner was felt, and in order to supply such an organ, the Committee started its monthly journal, which was soon expanded into a fortnightly. At present this magazine possesses the largest circulation of any German medical paper. It is a thoroughly practical paper, appealing to the general practitioner, giving full information regarding the various courses, not only those under the auspices of the Committee, but those organised independently of it, and articles of general interest, abstract of post-graduate lectures, and accounts of foreign graduate courses.

The Committee has throughout received the cordial support of the medical profession, without which it could not have achieved this success. Not less warm and openly expressed has been the support accorded to it by the Emperor and by the State. His Majesty has, on more than one occasion, paid a visit to the Kaiserin Friedrich Haus, inspected the collections, and expressed his gratification at the good work that the Committee is doing, while the State is directly represented on the Curatorium, and by means of its annual contribution has as directly identified itself with the work of the Committee. Their Majesties King Edward and Queen Alexandra, on the occasion of their last visit to Germany, honoured the

"Kaiserin Friedrich Haus" by a visit, and expressed to the management of the institution their enthusiastic appreciation of its merits and achievements.

NEW APPLIANCES & THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

MILK STOUT.

(MACKESON AND CO., LTD., Ashford, Dover and Folkestone.)

We have received a sample of the above preparation which consists practically of good stout, containing, in addition to its ordinary carbo-hydrate content, 2.5 per cent. of milk sugar or lactose. We have so recently in the Special Hospital Commission on Beer and Stout drawn attention to the method of production, chemical and physiological properties of stout that we need only repeat here that it is a beverage of high nutritive value, important therapeutic characteristics, and good thirst-quenching properties. The above stout has had its nutritive value materially increased by the addition of 2½ per cent. of milk sugar. Lactose or milk sugar is the sugar occurring naturally in milk and possesses certain advantages of other sugars, one of which at any rate is that as such it is not fermentable by the ordinary fermentative agents. The addition of the lactose has not in any way altered the taste or palatability of the stout. This stout is produced by a patent process due to the ingenuity of Mr. Melhush. Lactose has unquestionably a diuretic action, and its presence in this quantity in stout imparts to the beverage a stimulating action upon the kidneys. Our investigations have led us to the conclusion that the stout in question actually is what it is represented to be, and in our opinion it will form a useful addition to the pleasant and nutritive beverages worthy of being recommended by medical men to their patients.

ROYAL COLLEGE OF SURGEONS.

At the last quarterly meeting of the Council of the Royal College of Surgeons of England on July 8, under the chairmanship of Sir Henry Morris, president, the successful candidates at the recent election—Sir Watson Cheyne, Mr. R. Clement Lucas, and Mr. W. Harrison Cripps—took their seats as members of the Council. The President was congratulated by his colleagues on having received from his Majesty the honour of a Baronetcy. Mr. Henry T. Butlin, D.C.L., consulting surgeon to St. Bartholomew's Hospital, was elected President of the college, and Mr. A. Pearce Gould and Mr. R. Clement Lucas were elected Vice-Presidents. The following professors and lecturers were appointed for the ensuing year:—*Hunterian Professors*.—Messrs. Arthur Keith, W. Sampson Handley, George Coats, R. H. Paramore, and Charles Bolton. *Arris and Gale Lecturers*. Messrs. Sydney R. Scott and Peter Thompson. *Erasmus Wilson Lecturer*.—Mr. S. G. Shattock. *Arnott Demonstrator*.—Mr. Arthur Keith. An additional report from the Museum Committee regarding the revision of the Pathological Catalogue recommended the appointment, in addition to the present staff, of a pathological assistant and an expert to advise regarding the gynaecological specimens. It was agreed to carry out this proposal. The thanks of the council were accorded to the authorities of the Egypt Exploration Fund for a valuable gift of 83 VIth Dynasty skulls recently discovered at Abydos, in Egypt.

NEWS AND COMING EVENTS.

SINCE June 12, 1909, the Royal Sanitary Institute and Parkes Museum, has been removed to No. 90 Buckingham Palace Road, London, S.W.

THE total amount received up to July 12 at the Mansion House on behalf of the Metropolitan Hospital-Sunday Fund for this year was approximately £40,000.

THE Children's Sanatorium at Holt, Norfolk, for the treatment of phthisis, has just received a gift of £300 "In memoriam M. T." The amount will be placed to the fund for the permanent building which it is proposed to proceed with when the necessary amount is reached. It is understood that some six thousand pounds is required.

THE Leyton Urban District Ratepayers' Association has arranged to affix a memorial tablet to the birthplace of Sir Morell Mackenzie, 742 High Road, Leytonstone. The premises are at the corner of Browning Road, near the tram terminus and within five minutes of Leytonstone G.E. Railway station. The tablet will be unveiled on Monday, July 19, at 7.10 P.M.

THE third Norman Kerr Lecture of the Society for the Study of Inebriety will be delivered by Professor Taav. Laitinen, M.D., Professor of Hygiene and Director of the Hygienic Institute in the University of Helsingfors, Finland, on Tuesday next, July 20, at 8 P.M., in the lecture theatre of the Victoria and Albert Museum, South Kensington. The subject of the lecture will be "The Influence of Alcohol on Immunity."

THE Committee of the Royal National Orthopaedic Hospital, 234 Great Portland Street, London, W. (which is incorporated the City Orthopaedic Hospital), announces that His Majesty the King has consented formally to open, at 12 o'clock on Friday, July 23, the new hospital which has just been completed in Great Portland Street. His Majesty thus shows his appreciation of the important amalgamation of the three Orthopaedic Hospitals which formally existed in London. This amalgamation was carried through, after much negotiation, as the result of the policy inaugurated by the King's Hospital Fund Committee. Over £20,000 is still needed to complete the £75,000 which the new hospital has cost.

THE body of the late Dr. Cowas Lalcaha, M.D.Brux., L.R.C.P.Lond., L.M.S.Bombay, who was shot by an Indian assassin while endeavouring to protect from the same fate Sir Curzon Wylie at the reception at the Imperial Institute on Thursday, July 1, was buried in Brookwood Cemetery. There was a large attendance of prominent Indian residents in London, and Viscount Morley, Secretary of State for India, was represented. The coffin bore the inscription "Dr. Cowas Lalcaha, of Shanghai and Bombay, died July 1, 1909, aged 48 years," and was accompanied by many beautiful wreaths. Lady Wylie's tribute bore the inscription: "With deepest regrets. These flowers are sent by the wife of Sir Curzon Wylie in ever-grateful remembrance of the brave and noble man who lost his life on the night of July 1 in trying to save her beloved husband and others. With deepest sympathy." At Brookwood the coffin was carried to a mausoleum in the Parsee burying ground. The procession to the grave was headed by Parsee ladies and a large number of Indian and English gentlemen. At the mausoleum a short service was conducted by Mr. R. Desai, and the body was buried according to the rites of the Zoroastrian religion.

THE Chelsea Hospital for Women has lately received from Lady Tate the sum of £1,000 for the purpose of endowing a bed.

THE opening ceremony of the Convalescent Home of the Royal Edinburgh Hospital for Sick Children at Muirfield House, Gullane, takes place to-day (Saturday, July 17) at 3 o'clock P.M. A train leaves Edinburgh for Gullane at 1.35 P.M., returning from Gullane at 4.13 P.M. and 5.30 P.M.

PROFESSOR E. H. STARLING, M.D., F.R.S., president of Section I. (Physiology) of the British Association, has selected as the title of his presidential address "The Physiological Factors of Success." It will deal with the mechanisms which have been adapted by the animal kingdom in their struggle for existence and have led to rise of type—i.e., increased range of adaptation.

At a meeting of the West India Committee last week it was decided, on the suggestion of the Chairman, Mr. Owen Philipps, M.P., to send the following telegram to Mr. Chamberlain: "Mindful of all you have done for the West Indies and the Colonies and the interest you take in the School for Tropical Medicine, the members of the West India Committee desire to express cordial greetings to you on the occasion of your birthday."

THE Duke of Devonshire distributed the prizes last week to the successful students at Guy's Hospital Medical School, when Mr. Cosmo Bonsor, the Treasurer of the hospital, presided. The report of the Dean of the Medical School drew especial attention to the undoubted fact that at the present time the demand for qualified men far exceeds the supply, and that therefore the medical profession now holds out improved prospects to boys on leaving school.

THE National Food Reform Association informs us that it has now opened offices at 178 St. Stephen's House, Westminster, S.W., overlooking the Houses of Parliament. The Association has lately published a penny booklet entitled "Economical Dishes for Workers" suitable for district visitors and social workers. A specimen copy, with full particulars regarding the Association, may be obtained by sending a stamped addressed envelope to the Secretary at the above new address.

At the Festival Dinner held in aid of the funds of the Charing Cross Hospital at the Whitehall Rooms on July 13, under the presidency of the Lord Mayor of London, it was announced that £2,613 has been received. In responding to the toast of "Success to the Hospital," proposed by the Lord Mayor, Viscount Ridley, the Chairman of the hospital, appealed to the generous public for help in reducing the outstanding mortgage of £85,000, interest and sinking fund charges upon which are a severe handicap to the committee. He explained also that since the last festival dinner in 1906 £15,000 of debt other than mortgage has been wiped out, and the overdraft of £5,000 at the bank converted into a balance of £1,100. The annual expenses have been reduced from £26,000 to £23,500 without any diminution of efficiency. These improvements in the financial position of the hospital have been partly owing to some exceptional legacies, and Lord Ridley appealed especially for extra subscribers, so as to render the committee less dependent on such windfalls, which may not improbably be diminished in the near future as the result of increased death duties.

It is officially announced that his Majesty the King has consented to lay the foundation-stone of the new King's College Hospital buildings at Denmark Hill at twelve o'clock noon on Tuesday next, July 20.

On Saturday last, July 10, which was Degree Day at the University of Liverpool, Lord Derby, the Chancellor, conferred the degree of M.Ch. on Mr. Robert Jones and Mr. William Thelwall Thomas, two eminent Liverpool surgeons.

Mr. JOHN WILLIAM DAY, woollen manufacturer, of Harrogate, who died last April, out of an estate valued at 132,564*l.*, bequeathed 1,000*l.* to the Huddersfield Infirmary for the purpose of founding a John William Day bed, and 100*l.* to the Harrogate Infirmary.

At the first meeting of the council of the University of Bristol, on July 9, Dr. Lloyd Morgan tendered his resignation of the office of Vice-Chancellor, and Sir Isambard Owen, Principal of Armstrong College, Newcastle-on-Tyne, was elected Vice-Chancellor as from September 9 next.

THE late Dr. Percy Boulton, M.D., consulting physician to the Samaritan Hospital for Women and Children and to the British Home for Incurables, left estate valued at 20,520*l.* gross. He bequeathed 100*l.* to the Samaritan Free Hospital for Women, Marylebone Road.

THE Prince of Wales as Grand Prior of the Order of St. John of Jerusalem, at Marlborough House, on July 9, presented the awards of the Order granted during the past year for saving life, and the Service Medals awarded for conspicuous services to the Order. His Royal Highness afterwards presided at the annual meeting at Marlborough House of the General Committee of the Imperial Cancer Research Fund.

On Monday evening last, July 12, in the board room of the London Temperance Hospital, under the presidency of Alderman Sir T. Vezey Strong, Chairman of the Board of Management, a portrait of Dr. Dawson Burns was formally presented to the hospital. Dr. Burns was Hon. Secretary of the Provisional Committee in 1871-73, and has been the Hon. Secretary of the institution from 1873 to the present time. The portrait, which is considered an excellent and artistic likeness, was executed by Mr. Cecil Lawrence Burns, a younger son of Dr. Burns, and Principal of the Bombay School of Art, and it was offered by the artist to the board of management, on whose behalf it was gratefully accepted by Sir T. Vezey Strong. The company consisted of managers and various prominent supporters of the institution.

THE eighth International Congress of Tuberculosis was opened at Stockholm on July 8 in the Chamber of the Upper House of the Riksdag. M. Bourgeois, of Paris, presided, and the company included Prince Carl, Princess Ingeborg, and Prince Eugène, and there were also present delegates and representative scientists of all nations. Dr. Hope, representing the City and University of Liverpool, was at first the only one of the British delegates, while Dr. Theodore Williams was detained in Berlin by an accident. The deliberations of the Congress were especially concerned with preventive measures and systems of fresh-air treatment, and the injection of tuberculin. Surgeon Wise, medical director of the American Navy, strongly advocated legislation for the compulsory registration and segregation of tuberculous persons. At the termination of the Conference on July 10 the President expressed general gratitude to the King and Queen of Sweden and the city of Stockholm for their encouragement, co-operation, and hospitality, and Baron Tamm, President of the Swedish Anti-Tuberculosis Society, responded. The next conference will meet in Brussels.

THE DUCHESS OF ALBANY presided at a meeting of the Executive Committee of the Jubilee Fund of the National Hospital for the Paralysed and Epileptic, Queen Square, on July 8, for the purpose of making arrangements for the visit of the Princess of Wales on Saturday, October 9, on which occasion Her Royal Highness will receive purses of 10*l.* and upwards. It is understood that donors and collectors of such purses will receive invitations to be present when the King opens the Jubilee extension of the hospital on November 4. The Secretary of the National Hospital will be glad to hear from any lady or gentleman willing to provide a purse.

MEDICAL OFFICERS AND THE POOR LAW COMMISSION.

THE annual meeting of the Poor Law Medical Officers' Association of England and Wales was held at the Guildhall on July 6, under the presidency of Surgeon-General Evatt. The Lord Mayor and Sheriff Sir J. Baddeley extended an official welcome to the members, and in his reply the chairman deplored that at the present time there is no Minister of Health for England, whose duty it would be to speak for the medical profession as a whole and advise the Government on health questions. Dr. Major Greenwood, district medical officer of Shoreditch, read a paper on "District Medical Officers and the Report of the Poor Law Commission," and "Medical Relief and Public Assistance" formed the subject of a communication by Mr. C. S. Loch, secretary of the Charity Organisation Society. Mrs. Sidney Webb read a paper on "The Place of the District Medical Officer in a Unified County Medical Service." Dr. Smith-whittaker, the medical secretary of the British Medical Association, criticised the proposals of the Majority Report of the Commission, and in the afternoon a paper on "The Genesis of the Poor Law Infirmary" was read by Dr. F. S. Toogood, medical superintendent of the Lewisham Infirmary. Dr. G. F. McCleary, medical officer of health for Hampstead, read a paper on "The Public Health Aspect of the Royal Commission," and said that the real object of the Majority seemed to be the establishment of a State-aided insurance against sickness. Free medical relief would be afforded without adequate safeguards for the interests of either the medical profession or the ratepayers. In the discussion on the two papers Surgeon-General Evatt declared that the question of public health ought not to be considered solely from the point of view of the rates. On the motion of Dr. Major Greenwood, seconded by Dr. Napper, it was resolved that in any system of Poor Law medical reform there must be a distinct service for the sick State poor, so that they may be treated with due regard to economy, and to prevent pauperisation by granting free medical attendance to a large number of the community. It was also resolved that in sparsely inhabited rural districts, where access to the relieving officer is difficult, all persons requiring State aid shall apply to a special officer, who shall decide as to the right of the applicant to help.

Surgeon-General Evatt was re-elected president, Dr. D. B. Balding as chairman of Council, Dr. Napper as hon. treasurer, Dr. Lloyd Brown as hon. auditor, and Dr. Major Greenwood as hon. secretary for the ensuing year.

The annual dinner, held at the Waldorf Hotel, was also presided over by Surgeon-General Evatt, who was supported by Sir Walter Foster, M.P., Sir Dyce Duckworth, Alderman Sir Thomas Crosby, Sir Shirley and Lady Murphy, Prebendary Russell Wakefield, Mr. T. R. Ferens, M.P., Dr. Downes, the Mayor of Finsbury (Dr. W. A. Dingle), Mr. C. S. Loch, Mr. and Mrs. Sidney Webb, and Dr. M. Greenwood (hon. secretary).

NURSING ADMINISTRATION.

THE USE AND ABUSE OF NURSING CONGRESSES.

THE advantages of those professional gatherings, which have grown so popular in recent years, lie on the surface. Workers in the same profession too often bury themselves in absorption in daily routine, and lose touch altogether with the lives and labours of fellow workers. They either grow satisfied with imperfect methods, or enjoy some system perfected at the cost of many years' endeavour in splendid isolation. When they can be brought together, and induced to compare results with people working in other places under absolutely different conditions their horizon is inevitably widened, their minds are opened to the benefits which may be obtained by giving and receiving information, the crust of indifference or superiority breaks away. No congress ever revolutionises opinion. It is sufficient if it prove the occasion for diverse thoughtful papers, if it provoke lively discussion, if it lift into view defects known only to the inner few, and point the way to necessary reforms, it may be in the far future. These are the aims of such world-wide congresses as those of the British Medical Association, the English Church, the British Association. The habit of attending such meetings is growing among us. They are commonly enlivened by festive gatherings which appeal alike to the serious and the frivolous. Every one can appreciate the delights of sitting with pleasant company in historic gardens, and eating strawberries to the strains of a military band. It may be that such an exercise does as much to enlarge the ideas as reiteration of well-worn theories in the heated lecture hall. It is certainly good both for host and guest that generous hospitality should be exercised towards those of different customs, countries and languages, that the kinship of common aims should make itself felt through all the distinctions of professions remarkable for their fine grades of precedence and qualification.

But the very attractiveness of such congresses renders them a ready vehicle in skilled hands for conveying erroneous impressions to the public. It has happened continually in various callings that meetings of an apparently representative character have been engineered for the glorification of some special group of individuals, or for the advertisement of some specious theory from which the main body of professional opinion strongly dissents. The interest and pleasure attaching to the gathering is made a cloak for the introduction of much to which the mass of individuals composing it object.

There can be no doubt that the nursing congress which will be held in London next week is being regarded by the great majority of English matrons and nurses with feelings varying between amused tolerance and settled disapproval. The presence of many foreign delegates of assured position and honourable notoriety, the concurrence of a Cabinet Minister and other distinguished people, even the adherence of some who have done admirable work

in our own hospitals for the good of the nursing profession leave the main body of matrons and nurses absolutely without enthusiasm for the basis on which this imposing structure is reared. Their attitude was defined long ago by the most subtle of Latin poets, "We dread the Greeks even when they bring us gifts." It is a reasoned and reasonable dread. On what is it grounded?

In the first place English matrons have a justifiable dislike to the attempts which have been persistently made not only to force upon them a policy intensely distasteful to them, but even to make it appear that this policy is actually their own. They dissent strongly from the proposals for State registration of nurses put forward by the body which is responsible for summoning the present nursing congress, and they resent very deeply the imputations cast upon their sense and principles—imputations through which the supporters of registration in this particular form try to account for the small number of their own adherents. The matrons and nurses, who are constantly being told that their convictions are merely the outcome of cowardice, are not likely to be very enthusiastic about meetings in which every effort will be made to convince the public in this and other countries that the opinions they hold are not seriously entertained at all except by malicious and ignorant outsiders. They dread the glamour of festive gatherings which will be used as an illustration of an agreement in opinion which does not exist, and which ought not to exist, if by agreement is to be understood the domination of a small minority out of harmony with the general consensus of sound nursing opinion. In the second place English matrons distrust the whole tone and temper of the body controlling the congress. The most distressing manifestations of ordinary party politics have been freely imported into subjects which demand, above all else, the exercise of sound unbiased judgment. Those who touch upon these matters are constantly being drawn away, even it would seem in spite of themselves, into an unseemly heat; and some who in the calm of a philosophic mind perceive that the temper of the argument is of even greater importance than its matter, are driven to leave severely alone the conflict in which their motives are continually perverted.

We believe that it is the duty of those who love their profession to use the present occasion for the enunciation of sound principles, and to refute widely disseminated misrepresentations in respect to the general attitude of nurses towards the particular brand of legislative changes advocated by the promoters of the congress. A nursing congress is no place for recrimination and impatience with divergent views. It should have room for every shade of opinion, and those who may be called on to oppose will have ample opportunity for the exercise of a wise restraint and a good "temper" in discussion. The occasion calls for decisive action on the part of those well able to speak for the profession.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, JULY 19 to 24.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.

At 4 p.m.

July 22, Dr. Thursfield, Whooping Cough.

The fees for attending the lectures and demonstrations at the Hospital for Sick Children have been revised as follows:—Clinical clerks, special fee for three months, £3 3s.; Students' Ticket, three months, £5 5s.; Perpetual Ticket, £10 10s.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.

At 5.45 p.m.

July 20, Dr. W. H. George, Anæsthetics.

July 23, Mr. W. Wallis, Mouth and Teeth.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

July 19, Dr. J. Galloway, Skin.

July 20, Dr. Wm. Ewart, Medical.

July 21, Mr. Cecil H. Leaf, Surgical.

July 22, Sir Jonathan Hutchinson, Surgical.

At 5.15 p.m.

July 19, Dr. G. C. Cathcart, Stammering.

July 20, Dr. Leonard Guthrie, Some Nervous Affections in Children.

July 21, Dr. E. I. Spriggs, The Prescription of Dietaries.

July 22, Mr. Arthur Edmunds, Chemical Antiseptics in Modern Surgery.

July 23, College closes for Vacation.

LITERARY NOTES.

REPORT OF THE LOCAL GOVERNMENT BOARD INSPECTORS OF FOODS.

We have received a report by Dr. G. S. Buchanan, of the Local Government Board, summarising the work done in the new department of the Board devoted to the inspection of food, which has been in existence for two years. The department now consists of an inspector and two assistant inspectors; outside technical assistance being co-opted

when required. The food substances dealt with are tartaric acid, vinegar, imported meat foods, and canned and tinned meats. In addition to this, the questions of preservatives, food inspection at English ports, the Public Health (Regulations as to Food) Act, 1907, and foreign and colonial food legislation are discussed. The report is distinctly interesting, and shows that the department in question is, while being active in the interest of the public health, not hypercritical or cantankerous with regard to the great food industries. A separate leaflet contains the report of Dr. J. M. Hamill concerning the "facing" and other methods of preparing rice for sale. From this extremely interesting report it appears that both during the process of milling and subsequently for the purpose of polishing or glazing, rice is treated with talc to such an extent that it is not uncommon for the finished article to contain as much as 2 per cent. of extraneous mineral matter. In addition, for the purpose of producing a dead white appearance in the grain, certain blue dyes are also called into requisition. There is no suggestion in Dr. Hamill's report that these substances in the quantity likely to be consumed are injurious to health, but he does suggest that a rice containing more than 0.5 per cent. of mineral matter is essentially to the prejudice of the consumer in the sense of the Sale of Food and Drugs Act, in that the mineral matter in question is cheaper than the original rice and detracts from its nutritive value.

In current exegetical literature, we believe, the bibliography appended to an article is reckoned almost as important as the article itself. Things have not got this length yet in medicine. Rare studies there are, so original in conception as to have no relation to previous work, while a paper with anything in it cannot be spoilt by the omission of references, although these may well form the *differentia* between merely a good paper and an excellent one. A publication solely bibliographical in scope which fulfils its purpose very well is the *Internationales Centralblatt für die gesamte Tuberkulose-Forschung*. From the current number of this we learn of a statement made at the thirtieth meeting of Balneologists in Berlin, which will cause surprise in a considerable portion of the medical public of this country. It is that Sir Almroth Wright has long convinced himself of the impracticability (*Undurchführbarkeit*) of opsonin estimation in tuberculous subjects, and that in his clinic dosage and timing of tuberculin injections are settled from general clinical observation. Although the title of the article runs "On the necessity of opsonic control . . ."—the writer does not show himself in this matter more royalist than the King.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For GOUT and RHEUMATISM.

Professor Immermann, Basle, Professor of Internal Medicine at the University:—

"Hunyadi János has invariably shown itself an effectual and reliable Aperient, which I recommend to the exclusion of all others. Never gives rise to undesirable symptoms even if used continuously for years."

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

The Hospital

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SATURDAY, JULY 24, 1909.

THE CANCER RESEARCH FUND.

THIS year the committee of the Imperial Cancer Research Fund do not intend to publish any scientific report, as the work which has been in progress is mainly a further development of the investigations summarised in the Third Scientific Report published last October, and is not yet sufficiently complete for paper and print. In these circumstances the medical world, and the large numbers of the laity who take an interest in the war against malignant disease, will study with extra attention the speech of Sir William Church in moving the adoption of the report at the annual meeting of the general committee, held under the presidency of His Royal Highness the Prince of Wales at Marlborough House on July 9. It would seem that the destructive work of the Fund is still not fully accomplished—the clearing away of the many myths and fallacies which have collected round the subject of cancer. Until this is thoroughly effected it would be as idle to count upon any great advance of constructive therapeutics as to attempt to build an enduring edifice on the debris of a former ruin. This is not to say that no progress will yet be made, but only that no absolute certainty of it can be predicted; it is quite possible that a happy chance might at any time provide some notable improvement in our methods for dealing with the scourge, but the workers under the Fund Committee are quite rightly averse to any reliance upon chance. Probably the most important of the researches now going on are those in connection with the increased proclivity of mice to cancer through inheritance. The figures available are as yet insufficient, Sir William Church says, for any definite conclusion; but the opinion seems to be gaining ground that heredity is a much less important factor in determining the incidence of malignant disease than has generally been supposed, if indeed it has any particular influence at all. In the nature of things breeding experiments take time, and, although the investigators have the good fortune to find in the mouse a mammal which is especially prone to carcinoma, is prolific, short-lived, tame, and easily handled and fed, yet even then it is obvious that some years must elapse before problems affecting the aetiology of disease in remote generations from a cancer-infected ancestry can be solved. Another point which has engaged the attention of the workers

is the connection between implanted carcinoma and the development of sarcoma in the tissues of the host. A strain of carcinoma has been discovered which produces, when successfully inoculated, sarcomatous reaction in the tissues of the host almost constantly. What the precise significance of this peculiar fact may be is not obvious, but it at least shows how extraordinarily complex is the labyrinth in which the Cancer Research Fund are groping for clues.

Another important aspect of the case to which attention is being directed is the production of artificial immunity to cancer infection. Here a curious fact emerges. Whereas in diseases of definite origin the inoculation of killed cultures of the specific organism suffices to produce, in appropriate dosage, a high degree of artificial immunity, the same does not hold good of cancer. Artificial immunity, when it can be produced, is brought about only by the use of living cells (cancerous or not); and it is also noteworthy that whether physical or chemical means have been employed to destroy the vitality of cells which, when living, can confer immunity to cancer, the result is the same. Moreover when radium has been used in like manner, the immunising power of the cells is completely lost even though no microscopic structural change in the cells can be detected. Since this is true of both cancerous and non-cancerous protective cells, it is arguable that radium has no selective action on cancerous tissue. With respect to the treatment of malignant disease by trypsin and other ferments the report and Sir William Church are silent; but it would seem that facilities were afforded for independent investigation into this much-advertised and strongly criticised method of treatment with results completely fatal to the contentions of those who have advocated it. The history of the trypsin "boom" is highly instructive, for it is merely typical of too many pseudo-scientific efforts to treat disease. About five years ago the conception that the pancreatic digestive ferment might possibly have some direct local action upon carcinomatous cells originated in the mind of a certain gentleman who gave publicity to his idea. The method was tried upon a series of inoperable cases, and was believed to have done good. Seeing the possibilities of financial exploitation certain less reputable self-styled specialists

adopted the treatment, which soon received considerable advertisement in the lay Press. Every unprejudiced observer who followed the directions given for the application of the remedy soon arrived at the conclusion that it was not merely valueless but actually harmful; but, notwithstanding this, for a time the public flocked to those who were more content to fill their own pockets than to study carefully the real results of the treatment they carried out. The published statements of those who felt they could not recommend the trypsin treatment were discounted by assertions that some essential detail of the technique had been rejected; and new combinations of ferments, each in turn absolutely infallible, superseded one another as the perfected form of the remedy. Confused by their inability to distinguish the caution of the true scientist from the blindness of

unprogressive prejudice, the public could hardly be blamed for grasping at the proffered straws, any more than they can be for the credulity displayed in regard to many of the tuberculosis "cures" which have been boldly but dishonestly advocated by members of the medical profession in recent years. But if they will only take to heart the lesson of the trypsin incident and realise that leaps in the dark and brilliant guesses are essentially not the true way of scientific advance, but that the patient methods of the Cancer Research Committee is that which gives a real promise of solid progress in the future, then possibly out of evil may come good. For in that case it is unthinkable that the handicap of straitened circumstances shall be allowed to hinder a work which is neither for an age, but for all time; nor for a race, but for all the world.

THE INTERNATIONAL CONGRESS ON ALCOHOLISM.

THE twelfth International Congress on Alcoholism, which we announced some few weeks ago, is now in progress as we go to press with this issue of *THE HOSPITAL*. In view of the prominence which we have consistently given in these columns to the whole question of alcohol in its many and varied aspects—moral, sociological, pathological, dietetic and therapeutic—and the recent publication by us of the third of our Commission Reports on alcoholic beverages, it is natural that we should now watch with much interest and close attention the proceedings of the present congress in London. Moderation and scientific accuracy are essential to the success of any such large and elaborate attempt to accumulate evidence and report progress upon a matter of vital importance to the welfare of the race. Public opinion, which is the only permanent medium for affecting reform, is nowadays suspicious of any doctrine of social and moral regeneration whose chosen or self-selected advocates adopt a narrow, partisan and intolerant attitude. Those who, in pressing their views and proposals upon the community, "protest too much," and allow no measure of right or of honesty to their opponents, are only too often the means of stultifying the efforts of their equally sincere but less fanatical associates.

In that field of humanitarian reform, which concerns the protection of the animal kingdom from the oppression, ignorance and neglect of mankind, the Society for the Prevention of Cruelty to Animals has succeeded in its admirable work, and has indeed revolutionised the attitude of the lower and baser section of society towards dumb animals, because of the sanity, simplicity and moderation of its line of action. By keeping steadfastly aloof from all

those hot-headed inconsequent zealots, whose undisciplined outbursts only tend to obscure the real issues of the matter, and to retard progress in kindness and justice to animals, this Society has accomplished a great work, and earned the confidence and goodwill of every thinking person. So, as we take it, must the alcohol reformers do also, if they would succeed in like measure. And the holding of a responsible conference, at which, among other activities, unimpassioned scientific papers are read, and orderly practical discussions follow, is a means of progress, with which we gladly profess ourselves in sympathy. Of course we do not approve of every feature of the Congress, or view with satisfaction the more lurid and extravagant specimens displayed in the associated Exhibition. But we quite realise that an international conference, which aims at co-operation between all the varied and scattered units of the anti-alcohol army, as well as at inter-communication and cohesion between the scientific investigators of alcoholism in its every aspect, must include many delegates with extreme views and methods, and many features which seem useless and retrogressive to those who think as we do. The inclusive and representative nature of the Congress must therefore, we suppose, excuse whatever in it appears grotesque or futile or even pernicious to the advocates of true temperance.

As was well said by *The Times* on Monday "this is not a congress of teetotallers only. No test of opinion has been imposed on the delegates or other members." And we may hope that among the many papers those of high scientific importance will counterbalance those which seem to prejudice the advance of social reform.

ANNOTATIONS.

Medical Jargon.

At the annual dinner of the Medico-Legal Society held at the Holborn Restaurant on July 13 under the presidency of Mr. Justice Walton, the toast of "The Law and Medicine" was proposed by Sir W. J. Collins, who, in the course of his remarks, pleaded for the use of simpler language in medical and scientific papers. The Pathological Society came under his especial disapprobation on account of the incomprehensible jargon of scientific slang used at its meetings, which should, in his judgment, be replaced by the Anglo-Saxon tongue. If Sir William means that grammar is neglected and sense obscured by the careless and incorrect use of contractions and elliptical constructions in scientific works, then he has undoubtedly put his finger on a very weak spot in modern medical literature. But if he wants Anglo-Saxon words or words of Anglo-Saxon derivation to replace the compound Greek and Latin terms which are almost entirely used in Great Britain to express new scientific ideas, we fear his appeal will not be of very much avail. With the example of such stylists as Tyndall and Huxley it can never be contended that scientific writing need be either slovenly or barbarous, notwithstanding the occasional cumbersome of the technical terms in use. More stringent requirements of candidates for registration as medical students, with a view to ensuring some knowledge of, and therefore some respect for, their mother tongue, would be much more likely to obviate the tendencies to which Sir William Collins objects; probably the speaker had something of this sort in mind. In acknowledging the toast, the Master of the Rolls, Sir H. Cozens-Hardy, emphasised the point made by the proposer by saying that the long, unpronounceable, and unintelligible words used by some medical witnesses are the puzzle of juries and the distress of judges. Here the case for the use of simple and untechnical language is in our judgment much clearer. Scientifically speaking, great confusion would be caused by speaking of, say, "inflammation of the membrane between the skull and the brain" instead of the much more informative phrase "acute suppurative meningitis." The latter conveys to a medically trained hearer an exact picture of the condition and of the disease-process in action; the former conveys very little. Yet to a jury, or even to a judge, the simpler phrase conveys the truth and (as far as they can be expected to comprehend it) the whole truth, and nothing but the truth. Sir H. Cozens-Hardy added that lawyers have given up writing their opinions in Norman-French, but the parallel hardly holds to

that extent. At any rate, the Medico-Legal Society has done well to ventilate the subject, even if only in the informality of after-dinner oratory, for it touches one aspect at least of a very important and interesting topic—the need and possibility of improvement in current medical standards of literature.

The Problem of the Medical Treatment of School Children.

THE London Education Committee on July 14 at its last meeting raised again that controversial problem which concerns the best means of securing the medical inspection on an organised wholesale plan. It is almost obvious that, granted the necessity for medical inspection on an organised wholesale plan, the removal or alleviation of the defects and ailments then discovered is equally necessary, and indeed is the only logical excuse for the preceding inspection. Merely to show up evils, and thereafter impotently flourish them, at great pains and much expense and without hope of achieving a remedy, needs considerable justification to enlist approval from plain common-sense ratepayers. But how to secure the necessary treatment of the defects discovered by the school medical officers at their routine inspection is a subject upon which all are not as yet agreed. The two main proposals which have so far divided the opinion of those interested each concern principles of great importance to education authorities, to hospital managers and subscribers, to medical practitioners and to the general ratepaying public. Moreover, they touch very vitally, as many think, the future character, almost as much as the future physique and health, of the lowest classes, in whose direct interest they are, of course, brought forward. We shall not for the moment do more than indicate the two methods at present under discussion; but we shall refer again in the near future to this problem. Firstly there are those who think that existing institutions, such as hospitals, are competent and appropriate to deal with the matter; and, secondly, there are those who would like to see the establishment of school clinics. So far, the Education Committee, by a majority, have adopted the "hospital" and rejected the "clinic" method. It is now reported that letters have been sent to 56 hospitals for eye, ear, and skin diseases; explaining the object which the Council has in view; asking how far their existing organisation would enable them to deal with increased numbers of child out-patients; and inquiring as to the conditions upon which the hospitals would be prepared to co-operate with the Council. Replies received from 39 hospitals seem to indicate that the great majority are in favour of this "hospital" scheme, and are moreover ready and willing to help in its furtherance, in return for a minimum of financial aid from the Council.

MEDICAL OPINION AND MOVEMENT.

THE Treatment of Pneumonia by Iron is discussed in the *Indian Medical Gazette* by Capt. Thompson, I.M.S., who has treated a series of cases in the Midnapore Central Gaol with a modification of Basham's prescription. Every four hours he gave a mixture containing liq. ferri perchlor., xxv ; liq. ammon. acetat., 3j ; aq. chloroformi, ad 3j . No other drug or stimulant, except a brisk purge at the commencement, was given in ordinary cases; but any signs of cardiac failure or embarrassment were treated by the early exhibition of strychnine and digitalis. Alcohol was given to tide over any period of collapse at the crisis, if it seemed necessary. Until the adoption of this iron treatment the mortality in the gaol had always been very high—even up to 77 per cent.—owing to the poor physique of the patients; but since trying this routine the mortality from pneumonia has been but 9 per cent. The author recognises that many cases of pneumonia will do well on any treatment, but he believes also that iron exerts an especially favourable influence on the disease, and is preferable to the excessive use of stimulants often adopted. It has not, he admits, any specific action against the pneumococcus; but by increasing hæmoglobin it aids oxygenation, and thus helps the heart, so carrying out one of the main indications in the treatment of pneumonia.

THE Endemic Fevers of the Mediterranean Littoral are no longer, since the brilliant successes of Bruce and subsequent investigators into the once mysterious Malta fever, lumped together under the terms "simple continued" fever, "Mediterranean" fever, and so on; but are being gradually disentangled, and will probably some day be recognisable clinically as several distinct and separate diseases. In the *Journal of the Royal Army Medical Corps* Lieut.-Col. Gerrard attempts to differentiate three kinds of fever prevalent among our garrison in Malta, and usually returned on the sickness sheets as simple continued fever. These three varieties he names provisionally three-day, seven-day, and ten-day fever respectively, and he is inclined to identify the second of these with the disease described under that name by Major Rogers in Calcutta. This seven-day fever begins somewhat gradually, and patients admitted to hospital generally give a history of increasing malaise for two or three days previously: they complain usually of headache and backache. Constipation is the rule, abdominal distension is uncommon, the pulse is slow. Rose spots are often found, but appear as a rule only one at a time: the patient usually gets rid of his aches in a day or two, and his temperature reaches normal by lysis in about seven days. Malaria parasites are not found in the blood, and Widal reactions to typhoid and paratyphoid cultures are negative. The author confirms the observation of Major Rogers as to the saddle-back appearance of the temperature-chart in the early stages of the illness.

THE three-day fever is that which is commonest, and it presents many features in common with the disease described by Doerr among the Austrian troops on the Adriatic coast. The author believes that he has seen the same fever also in the Punjab, the Transvaal, and Natal. The symptoms come on rather suddenly, and consist of malaise and backache, which subside quickly under the influence of calomel and diaphoretics. A single rose spot is said to occur occasionally in the region of the umbilicus, which becomes a tiny pustule and then dries up. Ten-day fever, on the other hand, is more insidious in onset than either of the others. Headache is often severe, backache is not complained of. The flushed cheek, glistening eye, and dry, quivering lip all make one think of enteric fever, says Lieut.-Col. Gerrard. Distension of the abdomen is common, rose spots are seen much as in seven-day fever. The bowels are constipated, the pulse slow, soft, and often dicrotic. Some of these cases agglutinate the bacillus paratyphosus, and the author is inclined to regard all three fevers as clinical entities caused by organisms of the same type as the bacillus of Eberth; the arithmetical progression observed in their duration is, in his opinion, suggestive of relation between the organisms. As for the paths of infection, a mosquito, sand-fly, or house-fly is thought to be the probable channel for the three- and seven-day fevers. The recent work of Doerr and Taussig has, as a matter of fact, established that the Dalmatian three-day fever is carried by a biting sand-fly, which becomes infective eight days after acquiring the blood of a patient; and on this ground and because it can pass through a fine-grained filter, the Austrian observers have suggested that the organism is an ultra-microscopic protozoan.

ON occasions which, though very rare, do happen now and then in practically every hospital, the very grave disaster of Post-Operative Tetanus draws attention to the fallibility of the most carefully devised systems of aseptic technique. In the *Dublin Journal of Medical Science* Mr. L. G. Gunn gives a most interesting account of an outbreak in a private hospital, consisting of three cases within nine weeks, preceded nine months before by a suspicious case the exact nature of which is doubtful. The most elaborate and painstaking research was undertaken to trace out the origin of the infection. First and foremost the catgut was suspected, but, though tested thoroughly after each case, was always reported sterile. Moreover, the gut used was from four different consignments, each of which was distributed also to other hospitals without any ill-effects. Incidentally it appears that when the popular Fowler method of sterilising catgut by boiling in alcohol in a Jellett's steriliser (after washing in ether and soaking for some days in alcohol) is adopted, the boiling must be for at least thirty minutes. Dry heat and kumol is said to be even more effective. The theatre had been

twice repainted during the year: scrapings from all parts of it were examined, with negative results. The air, sponges, and dressings were each considered in turn, and excluded after careful cultural experiments. Last of all Mr. Gunn investigated the water supply. In a cistern under the roof, installed in connection with the hot-water supply two months before the first (doubtful) case, he found growing several masses of red fungoid material under a crack in the boards which covered the cistern. The conclusion arrived at is that the presence of these fungi and the darkness formed a suitable nidus for some stray tetanus bacillus, and that the occasional running dry of the cistern led to spore formation. The water used in the theatre was always boiled for two hours, all except some which was made up into saline solution, which was boiled for twenty minutes only. It is this saline which is believed to have contained tetanus spores undestroyed. The paper is most instructive throughout, and will repay the attention of all who are interested in the preparation of ligatures and other operating-room requisites.

AT a recent meeting of the Société de Biologie, Madame Girard Mangin made an interesting communication on the Toxicity of Extracts of Cancerous Growths. She finds that extracts from cancerous tumours, which have not undergone any suppuration and have been treated aseptically, show the presence of toxic substances when injected into animals. The tumours experimented with were obtained from animals and also from the human subject. The effects of these toxic substances are to reduce the blood-pressure and body temperature. Sometimes paralysis ensues, and, administered in fatal doses, they give rise to convulsions. Death ensues by cessation of respiration before the heart stops. In some cases the animals died in a state of profound anæmia and cachexia without any definite lesion. The extracts were made by pounding the tumour in normal saline solution. The author suggests that the toxicity of a tumour determined in this way may be of greater clinical value than histological examination, and gives examples of cases in which a favourable prognosis, founded upon the non-toxic effect of the tumour, has been confirmed by the subsequent history of the case. Thus in two cases of vegetating and rapidly growing cancers of the breast, extracts failed to show any toxic effect, and there has been no recurrence for three years. Similarly, in a case of renal epithelioma of a child a favourable prognosis has been confirmed.

AN interesting discussion took place at a recent meeting of the Society of Internal Medicine of Berlin on the Solubility of the Urates in the System. Dr. Gudzent claims to have demonstrated experimentally that uric acid may form with sodium two different combinations, one, which he calls *lactame*, is relatively soluble in blood serum, while the other, *lactime*, is much less so. He points out that the solubility of urate of soda is diminished by the presence of the sodium ion, and thinks that the fact that cartilage contains more sodium salts than other tissues explains the predilection of this tissue for local deposits of

urates. A further observation of the author may prove of some therapeutic importance. He finds that the emanations of radium retard the transformation of *lactame* into *lactime*, and, if sufficiently active, even increase the solubility of *lactame*. In the discussion which followed, Dr. Hans Kohn expressed the view that a more plausible explanation for the predilection of cartilage for urate deposits is to be found in the deficient blood supply, and consequent slow metabolism, which more readily allows the transformation of soluble urates into the less soluble form. This explanation is also applicable to the tophi which are found in extravasations, in the ear and other parts.

PROFESSOR GREEFF, of Berlin, believes he has discovered the long sought for causal microbe of Trachoma, and gives an account of his research in the *Deutsche Medizinische Wochenschrift*. It is a round or oval-shaped coccus, occurring in clumps, and is smaller than any coccus previously known. It is coloured violet or reddish with Giemsa stains, weakly with the aniline dyes, and not at all by the Gram method. The cocci are present within the epithelial cells, and in the stringy mucus. The clumps are frequently surrounded with a halo. He has not found these bacteria in any other pathological condition but trachoma. In order to find the cocci, a little of the superficial conjunctival epithelium is scraped off and spread upon a cover glass. It is necessary to obtain a fresh, untreated case of trachoma, for as soon as treatment has commenced the germs tend to disappear. After fixing the preparation in absolute alcohol for twenty to thirty minutes a stain of the following preparation is applied for nine hours: Twelve parts of Giemsa-eosin solution, three parts of Azure I., and three parts of Azure II. So far the author has not carried out any cultural or experimental observations, but he is convinced that the cocci he describes are the causal germs of the disease. Further confirmation of these observations will be awaited with interest.

ONE of the recognised difficulties in Skin Grafting is to retain the skin grafts in position by a suitable dressing, so that the wound can be observed from time to time without risk of interfering with the grafts. For this purpose, Dr. J. S. Davis, of Baltimore, uses coarse netting impregnated with gutta-percha. Dr. Ralph St. J. Perry, of Farmington, recommends silk veiling, sterilised and saturated with iodized paraffin. He gives an account of his method in the *American Journal of Surgery*. The silk netting should have a mesh of $\frac{1}{8}$ to $\frac{1}{4}$ inch, and is spread upon and fastened to wire frames about 6 inches square. In this condition it is boiled for half an hour in water to get rid of any stiffening substance, and then for another half-hour in 1 in 5,000 cyanide of mercury solution. After this it is dried in an oven for five minutes, then saturated with the paraffin solution and dried in the open air. The paraffin solution is made by dissolving boiled paraffin in redistilled gasoline, to which is added some resublimed iodine or iodoform. The paraffin solution rapidly permeates

the fibres of the netting, and on evaporation of the gasoline leaves a soft, flexible, non-absorbent, non-adhering antiseptic dressing, through which the secretion of the wound readily passes. Over this gauze or other absorbent dressings can be applied without fear of their pulling off the partially adherent grafts, and the open-mesh allows of easy inspection and cleansing of the wound surface. The author recommends keeping such prepared netting for future use by laying it between sheets of sterile paper kept moist with a solution of cyanide of mercury.

THE Chalk-like Deposits that appear upon the ears, about the knuckles, and in the olecranon bursa in gouty subjects are usually regarded as consisting almost entirely of sodium urate. That they are composed chiefly of the latter substance is true enough, but it is a new point of considerable interest that they contain not a little cholesterin as well. What the significance of this may be is not yet known, but the discovery may serve to throw new light upon the pathology of this form of gout. In the *Pharmakologische Centralblatt*, Matthes and Ackermann record the following analyses of a large whitish gouty deposit: Moisture 46.7, inorganic matter 11.6, organic matter free from ash 41.7 parts per cent. The ash gave 92.3 per cent. of anhydrous sodium carbonate, 4.8 per cent. of sodium chloride, the remainder being made up chiefly of iron potassium and phosphates. The dry material, organic and inorganic together, contained 76.7 per cent. of sodium urate and 6.8 per cent. of cholesterin.

THE Bruit de Moulin, or Mill-Murmur, first described by Bricheteau and popularised in France by Morel Lavallée, is considered a characteristic sign of pericardial effusion. It is, however, admitted by those who follow the classical description that the co-existence of such a murmur with tympany of the precordial area justifies a diagnoses of pneumo-pericarditis. At the same time Reynier has pointed out that such a bruit may be entirely extra-pericardial, e.g., when it follows a penetrating wound of the chest-wall with formation of an extra-cardial hydro-pneumothorax, and the prognosis is then much less grave than when its origin is intra-pericardial. If the murmur be due to such a wound, it is audible when the patient is in a horizontal position, but is modified or even disappears when he sits up. These changes do not take place when the murmur is due to pericarditis with effusion. Leriche has just published a case in the *Lyon Chirurgial* which confirms the researches of Reynier, the bruit being audible when the patient lay on his back, but disappearing when he sat up. This point in differential diagnosis would seem important both from the point of view of the surgeon and the patient, since it may prevent a useless operation being performed.

A NEW clinical sign of importance in cases of Injury to the Knee is described by Theoris in a recent number of *la Caducée*. The author calls it the "Sign of Patellar Escape." The patient to be examined is made to rest his leg, with the muscles

in a flaccid condition, on a couch, and the patella is then seized between the thumb and middle finger in such a way that the former lies above the base and the latter below the apex of the bone. The patient is then told to make a movement as though to extend the limb. If the limb is healthy the patella is found to slip immediately from the grasp, however powerful this may be, the ligament and tendon below and above the patella taking on the consistency of bone to the touch. If, however, the limb be injured by a blow or strain the patella escapes slowly from the grasp or may even remain held by it. A large series of conditions exists between absolute impotence of the quadriceps femoris as evidenced by the patella remaining held in the grasp, and muscular integrity which is shown by the escape of the bone. The sign, therefore, may be considered an adequate expression of the functional condition of the quadriceps femoris, on which depend the prognosis and treatment of traumatic synovitis. For the past six years, the author, who is medical officer to a cavalry regiment, has treated this condition by mobilisation of the muscles, the movements used, however, being those of extension not flexion. The movements are carried out at first lying down, but at a later period standing up, when the muscle has regained its functional activity. A complete cure requires rather over a fortnight of treatment. The author believes that if his method were generally adopted the number of days of sick leave necessitated by hydrarthroses and hæmarthroses in the French Army could be reduced by about two-thirds, for he has found that in the last six years it has never been necessary to send a case of synovitis of the knee to hospital. A cure always resulting from treatment by this method in the regimental infirmary.

IN THE HOSPITAL of May 29 last we gave an account of Surgeon Wright's Treatment of Tuberculosis by intra-muscular injection of succinimide of mercury. A recent number of the *Lancet* contains the report of a trial of this method on thirteen consumptives, male and female, made by Dr. Squire and Mr. Kilpatrick, at the Mount Vernon Hospital, Hampstead. They conclude that on the whole the patients so treated made quicker progress than the others. No bad results were noticed, or at least only temporary and slight inconvenience, although the experience was naturally not altogether grateful to the subjects of it. The full course of treatment, it will be recalled, is two series of thirty injections each (given at the rate of one every other day), separated by a fortnight's rest. The period of time required is therefore more than six months for a proper trial, and it lessens the value of Dr. Squire's and Mr. Kilpatrick's paper that the longest duration of treatment of any of their cases was eight weeks. The dosage of the mercury salt (gr. $\frac{1}{2}$) is rather less, too, than is laid down in the latest advice from Surgeon Wright, while that author also now dispenses, we believe, with the use of potassium iodide. Most will concur with the opinion expressed in the article, that the treatment deserves extended trial.

HOSPITAL CLINICS.

THE CLINICAL ASPECTS OF ARTERIAL DISEASE.

By SIR T. CLIFFORD ALLBUTT, K.C.B., F.R.S., M.D., D.Sc; Regius Professor of Medicine in the University of Cambridge.

(An address delivered at a meeting of the Metropolitan Branch of the British Medical Association, held at the Criterion Restaurant, Piccadilly, London, on Thursday, July 1st, 1909.)

MR. PRESIDENT AND GENTLEMEN,—With your permission, the remarks I shall make now will not take the form of a paper, nor, I am afraid, will they take the form of a very orderly speech. The subject which I have, perhaps unfortunately, chosen is one which would, as you can readily see, occupy a very great deal of time were one systematically to enter, in proper proportion, into all the various parts of it.

So there will be many gaps; upon many points I must touch without my data; I must make many assertions, apparently rash, and I can only ask your indulgence in this sense, that however imperfect the connection may seem to be between the facts and my conclusions, they are the best that I have been able to arrive at during some 40 years of observation and thought on the subject.

I will first trouble you with a few words of ancient history, by way of bringing in my point of view. The late Professor Burdon Sanderson and myself began, under Marey's influence, to work at the sphygmograph, more years ago than I intend now to reckon. Thus we came into association with that very distinguished young physician, only too soon taken from us—Dr. Mahomed of Guy's Hospital. During the early seventies Sanderson and I and Mahomed were working together at this subject, chiefly at the form of the pulse, and then Mahomed started us on the pressures as well as the form, and we were trying by means of the sphygmograph to get some notion of arterial pressures; this I will sum up by saying merely that, to our disappointment, this was not practicable.

Mahomed introduced a phrase which has now almost necessarily fallen into disuse, but which was then common amongst us, namely "the pre-albuminuric stage of Bright's disease." Mahomed was then under the impression, and so were we, that before Bright's disease appeared as a clinical process there was a period, longer or shorter, of elevated blood-pressure, during which time the encroachment of the disease could be foretold.

At that time and at that stage we suffered the very great loss of Dr. Mahomed by death. But, as time went on, I began to find that many of these pre-albuminurics did not pass on into Bright's disease; that on the contrary some of them were cured and got well, which rather shook one's notions on the pre-albuminuric stage of Bright's disease. It was not, however, until I had watched a certain patient for 18 years that I felt at liberty to publish any opinion upon the subject. This lady, who was one of the first to come under my observation as a "pre-albuminuric," never fell a victim to Bright's disease, but lived for 18 years afterwards, during which period she went through

a series of morbid processes with high blood-pressure to which I will refer presently, and died ultimately of a lesion which was not Bright's disease in any proper clinical sense of the word; in fact, from my point of view, it was not Bright's disease at all.

Then rather suddenly I left Leeds, I became a Lunacy Commissioner, and visited the asylums, where I found a very large number of persons suffering from arterial disease, yet many of them, I found, somewhat to my surprise, had apparently no rise of blood-pressure. We had at that time got some blood-pressure instruments, and I began to observe that cases should be divided, first, into Bright's disease—which I now put wholly apart and shall not refer to again; and secondly, into the class to which I gave the name *Hyperpiesis*, a gradual rise of blood-pressure towards middle life or early middle life, which has a course of its own, and deserves the name of a disease; and thirdly, into one other class at least of arterial degeneration which is not typically attended by rise of blood-pressure, in which the blood-pressure does not exceed the rise which is common to all persons when they get on in later life, and of which the symptoms and results are altogether different. At this period I wish to refer to the work which M. Huchard was doing about the same time. A few days ago I fortunately came upon a statement of his latest views by the Paris correspondent of the *Medical Press* of June 2, 1909. M. Huchard's view is that arterial sclerosis is a Disease. At the Toronto meeting I took for my text, as it happened, the very opposite—that arterial sclerosis is not a disease. Arterial sclerosis, I ventured to suggest, is the result of disease; it is the track of disease, but it contains the tracks of several diseases.

Arterial sclerosis may be a result, for instance, of syphilis; or it may be the result of a certain degenerative process going on in the arteries, without necessarily being accompanied by much rise of blood-pressure, and leading more to a calcification of the tunica media; or, again, the result of another kind of disease when the change is more fibrotic, and is an intimal or subintimal process, attended generally by high blood-pressure. Then we have to classify also a large number of toxic kinds of disease which produce arterial sclerosis; diabetes, syphilis, lead poisoning, and so forth. Arterial sclerosis, then, shows where many diseases have passed over, and left, probably not even a pathological unity, but various kinds of arterial disease which are lumped together under this anatomical name. I feel obliged, therefore, while speaking with the greatest respect of the brilliant gifts of our colleague Huchard, to point out where I venture to differ from him at the very onset; and I still stick to my text at

Toronto, that arterial sclerosis is not a clinical name at all; it is an anatomico-pathological result; and it seems to me very misleading to speak of it clinically as A Disease.

I need not follow M. Huchard's description of his disease, but will merely state that he divides it into cardio-renal arterio-sclerosis, cardio-sclerosis of myo-valvular origin, and cardio-valvular disease; the Stokes-Adams type. This is one of those generalisations which leave one breathless; I am very timid in attempting such flights and fear this one will not stand much hard work. How are we possibly to bring a malady like Stokes-Adams disease into any common classification with cases of arterial sclerosis? I must hold to the division which I made in 1894; namely, that we should separate arterial sclerosis first into the process to which I gave the name Hyperpiesis, which does not mean merely high blood-pressure; it means a disease the nature of which is unknown, but which may consist in an absorption of pressor toxins from the intestines. For some reason at any rate, the blood-pressure begins to rise in middle life, at 50 or 55 perhaps, and at first the patient may not feel anything but the better for it; there is a better supply of blood to the brain. But the pressure still rises, and as it does so, whether on account of the toxins themselves, or of the change in the arteries, we cannot tell—the patient feels symptoms which I cannot enter into now, but which are very characteristic, and enable us to make a diagnosis of these cases. This process, if not cured in time, will end in one of various ways—two especially. One is apoplexy, in contrast with the form of arterial sclerosis which I have called the Decrescent or senile form, which does not end in apoplexy, but in an obliteration of the cerebral arteries and thrombosis. To say, as Huchard does, that apoplexy results only from chronic Bright's disease is, again, I think, an impossible position; there are a very large number of cases of apoplexy which belong to Hyperpiesis, which I repeat is not the disease which we call Bright's disease.

Now let us stay to consider another point, the proposal or suggestion that all this hyperpietic disease is primarily of renal origin. This I neither contest nor assert; its primary causes lie in obscurity. What we must recollect is that Bright's disease—and perhaps I had better now confine myself to the chronic "interstitial" form of it—is a certain definite fairly uniform procession of symptoms, attended, I need scarcely say, with high pressures, but also with many other clinical features, such as headache, vomiting, certain diseases of the fundus of the eye; chronic uræmia, passing on, perhaps, into acute uræmia. And we find albumin in the urine generally, and granular casts perhaps always. It is to this definite clinical series to which the name chronic Bright's disease has been given, and in usage is given. But this is not the disease of which I speak under the name Hyperpiesis. It may be asserted that both these diseases have their origin in some renal defect, but such knowledge as we have is rather to the contrary. It is that the disease which I have called Hyperpiesis is due to absorption from the intestines of pressor poisons; such at any rate are the indications of the work done by Prof.

Dixon and Dr. Harvey in the Pharmacological Laboratory at Cambridge.

To two statements I must allude about the kidneys in Bright's disease. You all will remember the able essay in which Dr. Batty Shaw described some experiments on the part played by the kidneys in setting up such changes as those I have called Hyperpiesis. Now, whether of recent origin or not, the disease is not Bright's disease: it is another process with a uniform series of symptoms of its own. If you can catch any hyperpietic disease early, say within the first five years, you may cure it, and completely. Or, if it has been going on for four or five years, you may cure it once, but it comes back; you cure it a second time, and the cure is a little more lasting; cure it a third time, and if you are fortunate (which often happens), it never comes back again. Now chronic Bright's disease is never cured. When we speak of the so-called "pre-sclerotic" and "pre-albuminuric" conditions, we are speaking of perfectly curable conditions; not of incipient Bright's disease.

But it may be said the arterio-sclerotic kidney is, or becomes, Chronic Interstitial Nephritis. This I cannot for a moment admit. We know, from the experiments of Rose Bradford and others, how large portions of the kidney may be ablated with impunity; the same is true of other glands in the body, if time is taken to amputate gradually. For the narrower purposes of life there is organ enough left to get on with. So it is with the arterio-sclerotic kidney, a kidney which is very much deformed, lobulated, lumpy, irregular; but is technically not a "granular" kidney, and it should not be called granular. On section you will find in it a large amount of interstitial tissue no doubt, as you would in any organ of an old man; but if you look to the proper tissues of the organ itself, you will find many nests of normal kidney, plenty for an old man to get along with. In life there may have been slight traces of albumen, but few or no casts; and to the end of life the kidneys did well enough. But if the disease begins as chronic Bright's disease, it is a totally different affair. A lady, let us say, is confined; she has albuminuria. If the disorder proceeds, what does it go on to? To chronic Bright's disease. But if she dies in the first and acute stage, what do you find in the kidney? No interstitial changes to speak of. The feature is necrosis of the proper secreting structure of the kidney; widespread necrosis, so complete that she died promptly of uræmia. If instead of dying soon she goes on longer; if she lives even ten years, yet in the beginning and in nature the process was the same, a necrotic, destructive process in the proper secreting tissue of the kidney to which the fibrosis is secondary. This is not the arterio-sclerotic kidney; nor is it an old man's substitution-fibrosis; it is the ultimate consequence of a poison which destroys the epithelial tubes at their origin. Every case of Bright's disease consists in an attack upon the proper secreting structure of the kidney. The arterio-sclerotic fibrous kidney is in its very nature to be divided from that of chronic Bright's disease.

I need not delay you to say the same things of

the pancreas; and I think the emphysema of the lungs, which nearly always occurs in these cases, is also of the same nature.

I have spoken of apoplexy as one fatal termination of Hyperpiesis. Another frequent termination is by cardiac defeat rather than by cardiac failure. We hear every day now, that So-and-so died of "cardiac failure"; it is the fashionable phrase; as in our childhood we were puzzled with the question, "What did So-and-so die of?" the answer being "Shortness of breath." The modern Mr. So-and-so dies of "cardiac failure." I find in consultations also that the fault is always laid at the door of this poor organ, as having dilated and given way, degenerated, become sclerosed, etc.; whereas, on the contrary, the truth is that in cases of Hyperpiesis the heart gradually rises in value; it becomes largely hypertrophied, contains more blood, and drives that blood out with extraordinary power at pressures of 180, 200 220, 240 millimetres, and this for 5, 10, or 15 years. If ultimately it is defeated, is it fair to call its defeat a failure—except, perhaps, in a very temporary sense?

Here is an unhappy organ, overworking itself, developing an enormous power, 50 per cent. perhaps, above normal duty, for a number of years, and when ultimately it is defeated people talk of cardiac failure, and M. Huchard accuses it of degenerating in common with its arteries. Is it reasonable thus to disparage the heart which can no longer carry out an enormous task? In most cases Hyperpiesis is either cut short by apoplexy, or, if fought out to the bitter end, the heart dies not of any intrinsic vice or defect, but bravely in defeat.

I do not know why we talk of "cardio-sclerosis" at all; I do not know precisely what is meant by it. I know that in old people's hearts we find fibrous tissue more or less mixed with true muscular tissue, as we find in any other organ of the body, including the skin. But why stigmatise it as cardio-sclerosis? These hearts are enormously strong; they are doing an enormous quantity of work. Their elasticity is within narrower limits, but it is very high. I do not think we should look upon this state as cardiac disease. The coronary arteries are often diseased it is true. But Prof. Kanthack and I collected all the hearts we could—fresh ones—in cases of coronary sclerosis (the hypertrophic type), examined those hearts carefully, and concluded that the relation between the heart degeneration and the occlusion of the coronary arteries was chiefly a time relation. If the coronary arteries were blocked up rapidly, rapid and considerable cardiac degeneration ensued. But if the change extended over a very long period of time, although the coronary arteries were absolutely occluded, so that you could not say where they had been, you might and often did find a very fairly normal heart; sclerotic in the sense of having more common fibre than usual no doubt, but powerful enough to have driven blood through aortic orifices often of extreme stenosis. How can we call such hearts diseased in a clinical sense? Such a heart may have driven blood with prodigious velocity through an opening which would scarcely admit a probe; although the closed coronary mouths were barely

visible. The alternative circulation probably is by development of the veins of Thebesius. Apart from toxic influences, the resources and readaptive capacities of the heart are amazing.

Thus I have divided arterial sclerosis into three kinds—into (i) Hyperpiesis, which is a disease, and not merely a play of the blood pressures; (ii) a Toxic form, which I am sure you may well hope I shall not enter upon now, a state caused by syphilis, diabetes, etc., in some cases with high pressure—lead has it, diabetes has not. You may see arterial sclerosis in diabetic children, with a blood pressure of 90 or 100; and so again in phthisis, or syphilis. And (iii) there is the Decrescent form, which is a medial rather than an intimal disease, and is not attended with notably high blood pressures.

In some hyperpietic cases you find the radial artery very closely contracted, in other cases it is large and leathery; and I suppose in the contracted cases the peripheral constriction, which we assume in all these cases, extends very much higher up in the arteries of tertiary magnitude; and, as a matter of experience, the cases with the small contracted radials are very intractable, and are generally fatal by way of apoplexy.

In the Decrescent form people live to very long ages, and some of them are not very much the worse for this degeneration; although their functional capacity must be reduced. Yet I saw a gentleman not long ago, about 70 years of age, whose arteries are perfectly grotesque, thick and curly; yet he is very healthy, very well and active; and one day I surprised him in a game of tug-of-war with eight or ten junior friends. You may go into any hospital or workhouse and see quantities of such arterial sclerosis in people who live to great ages. The danger in this form is lest cerebral arteries silt up, and the brain suffer accordingly; but this is a different event from hyperpietic apoplexy.

It was the view of v. Basch, to whom we all owe so great a debt, that the high blood pressure is the result of the arterial change. But how can this be when we see these people, with blood pressures not more than 150, living to old age, and yet with the most contorted arteries? It is alleged that they must have high blood pressure because their areas of irrigation are shrivelled, therefore the blood not having the same space to occupy, the blood pressure must rise. This is virtually the old story of blood pressures depending on blood mass.

Mere loss of area has nothing to do with pressures. To make any effect on the blood pressure, the difference of blood mass or alternately of area of irrigation would have to be far more than ever comes to pass. Pressures can rise only when very large areas are constricted universally and together.

Before we can formulate any reasonable principles of treatment we must attain to clearer notions of the several processes concerned; in this purpose I have been endeavouring to assist. How these notions help us to a rational therapeutics I have explained in former papers, and hope before long to explain still more at length, but this evening I have detained you already too long.

SPECIAL ARTICLE.

OCHRONOSIS.

A SHORT ACCOUNT OF A RARE FORM OF PIGMENTATION.

ABNORMAL pigmentation of the integuments, although often of obscure origin, is by no means an uncommon condition.

The black staining of cartilage to which the term Ochronosis has been applied a little inaptly, is, however, a condition so rare as to constitute little more than a pathological curiosity. Only about a dozen cases have been recorded, and even in the descriptions of these there is some diversity. Professor Osler,* in 1904 published a short account of three cases, two of his own, brother's, and one of Ogden's. Dr. Frank Pope,† of Leicester, also described a case which presented in addition the features of other allied conditions, and a note was appended to his article by Dr. Garrod, upon the association of Ochronosis with alkaptonuria. Here the matter assumes a practical aspect and becomes of distinct importance to the medical examiner for life assurance.

OCHRONOSIS AND ALKAPTONURIA.

One of Osler's cases was a man who had been rejected many times by the medical referees for insurance offices, and the other had been definitely diagnosed as "diabetes" by distinguished German and English physicians; yet, though the urine in each case held a copper-reducing substance, in neither was there a trace of dextrose.‡

Futcher, who investigated one of them, and has reported very fully, states that his attention was arrested by a curious deviation from the normal appearances in the performance of the Fehling test. He added a few drops of urine to some boiled Fehling's solution; it was immediately turned brownish-black, and when the reduction took place the precipitate was a lighter yellow than usual, whilst the supernatant fluid was not decolorised. He then found that the fermentation test, the phenyl-hydrazine, and the bismuth (Böttger's) test did not come off, nor was the urine optically active. Nevertheless, the Fehling reaction had led very competent observers, individually, to the erroneous diagnosis of glycosuria.

Dr. Pope points out that Ochronosis occurs in the degenerative period of life, whether that of true senility, or whether, as in many cases, that of precocious senility induced by wasting disease. Alkaptonuria is by no means always associated, and even were it so, it must not be forgotten that in itself it is not inimical to life.

Futcher§ quotes many cases to prove the accuracy of this contention; thus Brune had an example in a perfectly healthy young man of 29; Kirk observed the condition in three brothers of tender years; Baumann and Wolkow saw it in a male of 67 and a female of 60, in whom the passage of dark or darkening urine had been lifelong; Ebstein

and Müller in a child aged eighteen months. Fürbringer's patient had miliary tuberculosis, and, most interesting of all, Geyger's patient had also glycosuria. This last observation recalls the "diabète bronzé" of Hanot, which is characterised by a pigmentation similar in some respects to the superficial coloration described in the cases of ochronosis. Opie and Osler, however, have described cases conforming to the type of diabète bronzé, without glycosuria; there is widespread hæmochromatosis, not only of skin but also of the liver, pancreas and spleen, together with enlargement and cirrhosis of these organs.

Robert Saundby some years ago described in the "Transactions of the Pathological Society of London" three cases occurring in a father, his son and daughter, who showed some excess of cutaneous pigmentation, and who all passed dark-coloured urine, which, in one instance at least, contained a copper-reducing substance. Two of them whom he examined had very considerable enlargement of the spleen, and in one patient, who died whilst under observation, there was found "atrophy" of the supra-renal.

PIGMENTATION AND ADDISON'S DISEASE.

The association of pigmentation with disease of the supra-renal is, of course, quite familiar under the name "Addison." Dr. Pope's case exhibited "tuberculosis of the lung and disease of adrenal glands (Addison's)," but the pigment, both in superficial distribution and in actual situation in the skin, was found unlike that of true Addison's disease. Instead of the deeper layers of the rete malpighii, it occupied the subjacent fibro-elastic bundles; a very similar position in fact to that held by the colouring matter of pigmented wens. There is no close relation between the pigment of Ochronosis, or the colouring substance in the urine, and melanin.

Dr. Garrod used the term alkaptonuria in the restricted sense of a urine containing homogentisic acid, or uroleucic acid, and not simply of one containing "a substance which reduces alkaline copper and greedily absorbs oxygen in the presence of an alkali turning black or brown," which was all that Bøedeker who introduced the term "alkapton" intended to imply. Albrecht's case of ochronosis had urine which satisfied Bøedeker's definition but did not contain homogentisic acid, and we think with Guiart and Grimbert that the broader meaning might well be retained.

In Pope's case, though black urine was passed, this was probably due to the carbolic lotion with which for years the patient had dressed a chronic ulcer of the leg. Phenol and its derivatives not infrequently, although capriciously, determine the passage of dark urine, and this will sometimes reduce Fehling's solution.

* *Lancet*, January 2, 1904. † *Lancet*, January 6, 1906.

‡ *New York Med. Journ.*, January 15, 1898. § *Loc. Cit.*

MEDICINE.

GROCCO'S PARAVERTEBRAL TRIANGLE AND ITS VALUE.

GROCCO's sign scarcely deserves the contemptuous neglect into which it has fallen, in many quarters, together with various recent mushroom growths of diagnostic technique, which, after hindering progress for a little while, pass each into oblivion. For there really seems something to be learned from it. Every physician knows the difficulty, in cases of pleuritic effusion, of determining whether the abnormal physical signs, which may persist for weeks after the chest has been tapped, are due to the persistence of fluid, or are only the after-effect of compression of the lung by fluid that has now quite gone. It is stated that, if there had been dulness in Grocco's paravertebral triangle during the early stages of the effusion, and if that dulness subsequently disappears, even though all the other signs remain much the same, the presumption is strongly in favour of the fluid having cleared up. If Grocco's sign can teach us nothing more than this it is a valuable point in diagnosis, and is well worthy of consideration.

GROCCO'S SIGN.

The sign consists in the occurrence in cases of pleuritic effusion and empyema of a triangular area of dulness at the lower part of the healthy side of the chest posteriorly. The base of the triangle lies approximately along the eleventh rib in the horizontal plane. The apex is rather below the upper level of dulness on the diseased side. The sides of the triangle are formed by the vertical median line of the spine internally, and externally by an oblique line joining the apex and the outer extremity of the base. The base itself varies in length from an inch and a half to four inches, the exact length varying roughly with the size of the effusion upon the other side. This triangle is now generally known as Grocco's Paravertebral Triangle.

As regards the value of the sign, all physicians will agree that any aid to the diagnosis of effusion in doubtful cases is to be welcomed. Most observers who have studied the sign, moreover, insist upon its value. Dr. Moorhead recently read a paper upon it before the Section of Medicine of the Royal Academy of Medicine in Ireland, and his own conclusions,* stated briefly, are as follows:

(1). The sign is found only in cases of pleural effusion, and it is absent in pneumonia and in pulmonary fibrosis. Dr. Moorhead has been unable to satisfy himself of the presence of a bilateral paravertebral triangle of dulness, as described by Dr. Ewart in ascites. He has met no case of pericardial effusion with dorsal dulness since he began to study the sign, nor any case of subphrenic abscess; but he thinks the latter at least might cause a small paravertebral triangle of dulness like that of pleural effusion.

(2). The sign is not invariably present in pleural effusion. This is in agreement with the earlier observations of others, though some clinicians now insist that it always accompanies effusion. Some

maintain that the dulness is best marked when the effusion is on the right side; but this is not by any means a universal rule.

(3). The sign, when present, is of great value; its absence is of much less import.

(4). If the sign has once been observed in a given case, its disappearance is of great value in distinguishing between thickened pleura on the one hand and persistent effusion on the other.

(5). Dr. Moorhead never observed the dulness to extend above the fourth dorsal spine even when the effusion filled the whole of the opposite side of the chest. This observation does not agree with the statements of Dr. Ewart and others; but he is convinced of its correctness in his own cases, and he believes this to be due to the fact that the easily movable "mediastinal mesentery," as he calls it, does not extend above the fourth dorsal spine.

THEORIES AS TO ITS CAUSATION.

There are three alternative explanations of the cause of Grocco's sign:—

(1). Some observers hold that the dulness normally exists on both sides, but that it has hitherto been overlooked. They say it is due to the shape and increasing thickness from above downwards of the *erectores spinæ* muscles. This view is easily disproved by simple percussion of normal individuals.

(2). Others hold that the dulness is due to a damping effect exerted by the effusion, which prevents the vertebral column from conducting the resonance of the sound side. This damping effect, it is urged, would be exerted to a greater extent at the lower part of the thorax when the costo-vertebral space is deep and the fluid abundant, than above where the fluid is more scanty and the costo-vertebral space shallow.

(3). A more likely explanation is that which attributes the dulness to mediastinal displacements. An effusion upon the right side, for example, pushes all the movable contents of the mediastina towards the left, thereby causing more or less compression of the lower part of the left lung, with consequent impairment of note at the left base reaching a variable distance outward from the middle line. There is a "mesentery" of the mediastinum extending from the back of the pericardium to the vertebral column, not usually described by anatomists, but well seen in a transverse section of a chest hardened in formalin. This mediastinal mesentery extends upwards only to about the level of the fourth dorsal vertebra. In at least one case of extensive pleural effusion, in a still-born child, displacement of this mediastinal mesentery over to the sound side has been demonstrated. That this displacement may well be the cause of Grocco's paravertebral triangle of dulness is proved by the experimental injection of gelatine into one pleural cavity of a cadaver; the characteristic triangle of dulness appearing at the other base with displacement of the mediastinal mesentery towards the uninjected side.

* *Dublin Journal of Medical Science*, 1909, p. 419.

ASCITES—VII.

THE DIFFERENTIAL DIAGNOSIS OF THE CAUSE OF ASCITES (*Continued*).

ASCITES, when due to obstruction of the portal vein by pressure or invasion from outside, is generally associated with intense jaundice, owing to the simultaneous obstruction to the common bile duct or the hepatic ducts. Tumours may be felt, but great difficulty is often experienced in accurately determining their nature and origin.

Tumours of the liver or of the gall bladder are associated in the majority of cases with hepatic enlargement. Careful examination of the edge and surface of the liver under such circumstances may adduce valuable evidence as to the cause of its increase in size.

Tumours of the head of the pancreas may not only cause deep and persistent jaundice, but they also lead to enormous dilatation of the gall bladder; the enlargement of the latter may be as great in cases of carcinoma of the head of the pancreas as in any other condition whatever. In addition to this there may be glycosuria, and the stools may contain excess of fat and many undigested muscle fibres. Even if glycosuria itself does not occur, the urine may give a strongly positive Cammidge's reaction. On account of the close relation of the pancreas to the aorta, a well-marked transmitted pulsation may be felt in a pancreatic tumour. If the stomach is inflated it may be possible to demonstrate that the tumour lies posterior to this viscus, a sign of much diagnostic importance.

Tumours of the kidney may be associated with hæmaturia, albuminuria, pyuria, and the presence of abnormal cells, or even obvious fragments of new growth in the centrifugalised urinary deposit. When large, a renal tumour of the right side is apt to become attached to the under surface of the liver, in which case it becomes difficult of distinction from a hepatic enlargement or from a big dilated gall-bladder. On the left side a splenic enlargement may be simulated. We have dealt with the differential diagnosis between renal and splenic tumours in a former article.

Carcinoma of the stomach, if it were the direct cause of ascites—as distinct from causing it indirectly after leading to secondary deposits in the peritoneum, or in the portal glands—would most

likely be situated at the pyloric end, and would thus give rise to pyloric obstruction and gastrectasis, with copious vomiting at intervals, and with all the familiar physical signs of dilated stomach. Enlarged glands would be secondary to changes in other organs. Pathological curiosities, such as aneurysm of the hepatic artery obstructing the portal vein and thus causing ascites, need not be discussed.

Thrombosis of the Portal Vein.—In addition to obstruction from without the portal vein may become partially or wholly occluded by thrombosis from pyelephlebitis. The diagnosis of this condition is decidedly difficult. It has to be distinguished from the other forms of portal obstruction just mentioned, and also particularly from cirrhosis of the liver. The absence of all history of alcoholism and of the signs it often leads to, and the absence of any other known cause of portal obstruction in a patient who has rapidly developed ascites, considerable enlargement of the spleen, dilatation of the superficial abdominal veins, and possibly hæmatemesis, should suggest the possibility of adhesive pyelephlebitis as a diagnosis. In this disease the fluid may re-accumulate as rapidly as under any other circumstances after the abdomen has been tapped.

Obstruction of the Hepatic Veins or of the Inferior Vena Cava at the level of, or above, these veins may occur as a result of thrombosis or obliterative inflammation of the hepatic veins or of thrombosis of or pressure on or invasion of the inferior vena cava by tumours at the level of the diaphragm. It must necessarily be a rather rare condition, but it is important because it is so apt to be overlooked. Ascites is invariably produced, and, as in cardiac disease, it is usually preceded by swelling and œdema of the feet and legs. The subcutaneous abdominal veins may be dilated and tortuous with reversal of the normal direction of blood-current in them. The spleen is usually enlarged, and there may be gastro-intestinal hæmorrhages. Œdema may reach up the back to the level of the ribs, and there may be both albumen and blood in the urine, with abundance of renal epithelial cells, owing to stagnation in the renal veins.

(*To be continued.*)

PRACTICAL NOTES ON DIAGNOSIS AND TREATMENT.

The Treatment of Lupus.

IN the treatment of lupus the object to be aimed at is the complete removal or destruction of the diseased tissue. For this purpose internal treatment is useless, although it may sometimes be of service indirectly by remedying any constitutional condition which favours the proliferation of pathogenic micro-organisms.—*Sir Malcolm Morris.*

Rubber Operating Gloves.

To my mind, the greatest step in the advance of asepsis in operative surgery is the appreciation of the fact that the skin of the surgeon's hands is one of the chief infecting agencies which patients risk when they submit to a surgical operation.—*Mr. Bland Sutton.*

The Repair of Fractures.

It is a mistake to suppose that the exact restitution of the length of the limb is an essential condition for the restoration of muscular power and usefulness. My observations have shown me that some shortening is favourable, rather than the reverse, to muscular efficiency.—*Professor Lucas-Championnière.*

The Itching of Dry Eczema.

IN later stages, when the eczema has become dry, the following lotion is useful, applied with a brush in a thin coating:—

Picis Carbonis	...	...	3j.
Benzol	...	...	3iv.
Acetone	...	...	3ij.

—*Dr. Graham Little.*

SURGERY.

THE CONDITION KNOWN AS "SURGICAL KIDNEY."

DEFINITION.

THE title of "surgical kidney" has long been used to denote a condition in which symptoms referable to disease of the kidney make their appearance secondarily to other surgical conditions, but principally obstructive or paralytic lesions in the lower urinary tract.

The kidney is liable to a number of affections which are the outcome of one or both of two main factors, which are (1) obstruction to the outflow of urine and (2) infection either from without or from the blood stream. The actual condition found will vary in each case according to which of these factors is the more powerful. Sometimes, however, only one of these causes is present. Thus obstruction alone gives rise to hydronephrosis, though it is always possible that infection may occur later and a typical pyonephrosis result; and, again, infection of the kidney without obstruction will most probably cause a condition of acute nephritis.

But where the two causes are present at one and the same time, the result will depend on the relative proportion of infection and obstruction. Thus where the obstructive element outweighs the infective a pyonephrosis is likely to occur, but when these are equivalent pyelonephritis is most often set up, and this is typically the condition to which the name of surgical kidney has been applied.

Pyelonephritis must be regarded then as the result of an ascending inflammation which is secondary to any condition which prevents the natural outflow of urine. It must not be thought that the name implies that the condition is the result of surgical interference; this is not the case.

The common causes of obstruction to the outflow of urine are situated below the neck of the bladder; they are urethral stricture, whether this be traumatic or gonorrhoeal in origin, and enlargement of the prostate. Any morbid condition which prevents the bladder from emptying itself, such as disease of or injury to the lumbar spine at the level of the bladder centre will have the same effect. In these cases the renal condition will be bilateral. But pyelonephritis can also occur in a single kidney from obstruction to the passage of urine along one ureter, as, for instance, by the impaction of a calculus in it.

The bladder condition probably acts upon the kidney in more ways than one: (1) the whole genito-urinary tract is constantly irritated, and therefore in a state of persistent hyperæmia, resulting in interstitial nephritis, and (2) as the result of the obstruction the urine is retained under pressure in the pelvis of the kidney which gradually becomes distended; and as the pressure is distributed backwards to the renal substance, the kidney itself is damaged and in time becomes reduced to a collection of cysts.

ORIGIN OF THE INFECTION.

But where does the infective element come from? It has been suggested that this is always the result

of the passage of a catheter which is not strictly aseptic. There is no doubt that this occasionally occurs, but that there is ample evidence that it cannot be held responsible for all cases, since pyelonephritis is sometimes met with in cases on which instrumentation has never been performed.

If the outflow from the bladder has been obstructed for any length of time, as, for instance, in a case of enlargement of the prostate, the urine which is withdrawn by catheterisation will be found, if examined microscopically, to contain a number of micro-organisms, any one of which may have the power of ascending the ureters and setting up more or less acute inflammatory changes on the kidney. One kidney is usually affected before the other, but since in the vast majority of cases the obstruction is situated below the neck of the bladder, the condition becomes bilateral sooner or later; but, even then, it will be found post-mortem that one kidney is in a more advanced state of degeneration than the other.

From what has been said, it will be seen that, clinically speaking, the condition is one that should be guarded against by prophylactic measures, since it is hopeless to expect a complete cure when once it has declared itself. In all cases, then, in which there is obstruction to the outflow of urine, two obvious duties confront the surgeon. One is to restore the lumen of the urinary passage with the least possible delay, and the second is to take scrupulous care to keep the interior of the bladder clear by irrigating it with bland antiseptic lotions.

SYMPTOMS AND SIGNS.

The disease shows itself insidiously. The patient may at first complain of symptoms which have no direct reference to the kidney, such as anorexia or dyspepsia and sleeplessness; and at the same time a slight rise of temperature may be observed. Later he will complain of pain in one or both loins. The urine, which may at first be acid, becomes alkaline later. If examined microscopically it will be found to contain a small amount of pus, albumen, and renal epithelial cells and casts. Examination of the abdomen will reveal a tenderness on palpation in one or both loins, but there will not be any palpable enlargement of the kidney unless the condition has gone on to a pyonephrosis.

The preliminary symptoms should be sufficient to awaken suspicion that the kidney is already damaged, and if the patient is not already in bed he should at once be put there. The obstruction to the outflow of urine should be removed. This is most important, and it is better even to perform a suprapubic cystotomy as a temporary measure than to risk any delay. The bowels should be kept freely open. Drugs should be prescribed which have a diuretic effect as well as a local antiseptic action on the urinary tract. The writer has obtained good results from the use of helmitol, grains xv., three times a day. In addition the bladder should be sedulously irrigated. A good prognosis, however, can hardly ever be given.

DISEASES OF CHILDREN.

THE TREATMENT OF ENURESIS.—I.

IN a recent paper* Dr. Leonard Williams has advocated very warmly the administration of thyroid extract in the treatment of enuresis in children. Indeed, from the tone of his communication and the enthusiastic advocacy of the remedy, it might run the danger of being regarded as a specific for this unpleasant and troublesome affection. No doubt many physicians to hospitals for children have made use of the remedy, and obtained good results in suitable cases, namely all those in which there is evidence in favour of a possible defect in thyroid secretion. Such patients are often below the standard in height, weight, general nutrition, and mental capacity, or in one or more of these characteristics. It is noticeable that Dr. Williams found similar evidence in some of his patients, except in so far as the mental capacity was apparently extra good—at any rate, quite up to the average. The dosage was from one to two and a half grains of the extract three times a day. Out of 25 patients thus treated eight were cured, four decidedly better, 13 improved, and only one a complete failure. These results are not very remarkable, for it is well known that in this peculiar affection any systematic course of treatment is likely to cure some cases, probably through the mental effect.

Dr. Williams concludes that adenoids are not the cause of nocturnal enuresis. Probably no one supposes that adenoids are a cause, except in that they may prove the final straw, by leading to imperfect aeration of the blood during sleep and deficient control by the inhibitory cerebral centres. It is well known that the removal of adenoids may be followed by the cessation of enuresis, and that any other operation may have a similar effect. The enuresis may return after a variable period of days or weeks, or it may be started by an operation in a nervous child who has not suffered previously from the affection. Even the psychological effect of a change of surroundings is often enough to stop the affection, perhaps to break the habit with permanently good results. Many a child with enuresis ceases to wet the bed when admitted to hospital. Hence it seems rather unnecessary to consider Dr. Williams' suggestion that possibly the adenoids themselves may be due to thyroid insufficiency, which he regards as the cause of enuresis. His argument is still further weakened by his statement that the thyroid secretion "is a regulator of the mechanism by which urinary incontinence is controlled; an excess of secretion being almost, if not quite, as deleterious as an insufficiency." It is an impressive statement, though somewhat vague. Which is the mechanism that is thus controlled? Is it the centre in the lumbar enlargement or inhibitory centres in the higher parts of the central nervous system? Or are we to assume that the efferent and afferent nerves are profoundly affected by a little more or less thyroid extract. Probably the true explanation of the evil effects of excessive dosage is

the general disturbance of metabolism and health resulting from its administration. Nevertheless, though much can be said against the theory of thyroid action in these cases, there is no doubt that good results may follow the use of the drug, and it is worthy of trial in selected cases.

The whole treatment of this affection has become complicated by the fact that it is so frequently associated with other affections common in the early years of life. Many of these are merely coincident, whereas others may be indicative of a nervous instability at the bottom of the complaint. It is advisable to remedy any local affection which may be in any way a source of irritation, either of the general health and nervous system or stimulating reflex action. An adherent prepuce or clitoris, phimosis, retained smegma, balanitis and vulvo-vaginitis must be attended to. Such affections constantly exist without causing enuresis, and must not be regarded as primary causes. Remove adenoids and enlarged tonsils if they interfere at all with free breathing, and put the alimentary tract into a healthy state, for there is no doubt that any cause of lowered general health interferes with the cure or maintains the existence of enuresis. On similar grounds threadworms should be got rid of. The internal administration of sulphur lozenges, or a dose of *santonin* and *calomel*, may be sufficient for this purpose, and it is even justifiable to give such a dose though there is no evidence that these parasites are present. That they act through reflex irritation of the lumbar centres is unlikely. More probably they are a persistent source of nerve irritation, and lead to an increased excitability of the nervous system as a whole. Similarly it is important to examine the urine. Acquired cases are sometimes found associated with highly acid urine, an excess of uric acid or calcium oxalate crystals, or with bacteriuria. The cure of these conditions may stop the enuresis. Unfortunately comparatively few cases are due to these causes, but they must not be overlooked, for it is useless to treat such patients by a prolonged course of *belladonna*, for instance, though the patient may get well under such treatment if the urinary abnormality is the effect of temporary causes. Bacteriuria may exist without cystitis. It is more common in girls than boys, because organisms can more readily make their way up the short urethra into the bladder.

No barbarous measures such as corporal punishment, dark cupboards, and bread and water diet should be employed. They are cruel and apt to make a nervous child much worse, though they may occasionally prove beneficial. In the same category may be placed such lines of treatment as the application of nitrate of silver to the neck of the bladder—only in rare instances justifiable—massage of the prostate and neck of the bladder, blistering, and epidural injections of normal saline or one per cent. *stovain* solution, the effects, if any, being merely psychical.

* *Lancet*, May 1, 1909, p. 1245.

GYNÆCOLOGY.

PATHOLOGICAL CHANGES IN UTERINE FIBROIDS.

THE importance of uterine fibroids as causes of serious illness and danger to life very often depends upon some degeneration occurring in the tumour. Much attention has recently been called to these changes, especially to necrobiosis, or red degeneration, and many operations have been recorded which have been rendered necessary on account of important symptoms set up by these changes. The hæmorrhage and pressure symptoms caused by fibroids in themselves may be serious enough to warrant radical operations, but they become doubly important if the patient suffers, in addition, from toxic symptoms fever and pain the result of degenerations. Of the changes more commonly seen in fibroids, necrobiosis has attracted most attention recently, although probably mucoid degeneration leading to cystic changes is more common. In addition to these, however, inflammatory changes (the result of infection), calcareous degeneration, and possibly sarcomatous degeneration, occur sufficiently often to deserve notice, especially with regard to the important symptoms they cause.

Necrobiosis, or red degeneration, shows itself as a real death of the fibro-muscular tissue, leading to loss of staining power and gradual disintegration. It was formerly supposed to be aseptic and dependent upon some change in the blood supply of the tumour whereby the growth was deprived of circulating blood, and consequently underwent necrosis. Recently, however, it has been suggested that the primary change is due to thrombosis of the veins in the capsule of the tumour, possibly the result of sepsis, and various organisms have been described as being the cause of this. The reports of these cases, however, are not beyond criticism, and at present it cannot be accepted without reserve that red degeneration has a microbial origin. There is no doubt, however, that the co-existence of pregnancy and fibroids is responsible for a large number of instances of this change, and the diversion of the blood-flow from the tumour to the pregnant uterus seems to be a natural explanation of the phenomenon. The uterine contractions occurring throughout pregnancy must exert some influence upon the nutrition of fibroids, and the constant associated anæmia in the tumour finally reduces its nutrition to the lowest ebb.

The appearance of a necrobiotic fibroid is characteristically red, contrasting very clearly with the normal greyish-white colour. This is especially the case when the change is only partial, as often is the case. When cut into fresh, these red areas are said to give out a "fishy" odour, quite unlike the smell of decomposition in gangrenous fibroids. Microscopically, the change is essentially a necrosis without any liquefaction of the elements of the tumour. The individual muscle-cells and connective tissue fibres can still be recognised, but they stain only with counterstains like eosin, and their nuclei have quite lost their staining power with basic dyes like hæmatoxylin.

The symptoms produced by necrobiosis are characteristic and are primarily two—namely, pain and rises of temperature. As fibroids, apart from the pressure they may cause, are usually painless and unaccompanied by fever, these two symptoms are sufficiently striking to draw attention to the change in the tumour, and are often important indications for radical operations. The pain must be ascribed to tension in the capsule of the tumour due to swelling of its contents, and in some cases at least this is contributed to by thrombosis of vessels and subsequent effusion of plasma in between the tumour and its capsule. The fever is more difficult to explain, unless the septic theory of the change is eventually proved to be correct. Apart from this, it is reasonable to expect that there must be absorption of products from the necrosing tissues, even if aseptic, just as absorption of effused blood will sometimes cause rises of temperature.

The treatment of necrobiotic fibroids has hitherto been removal, either with or without the uterus, and the results of the operation are exceedingly good. There is no evidence to show what would happen to these tumours if left alone, and how long the change can be permitted to go on before the patient becomes seriously ill. It is possible that a necrobiotic fibroid may be gradually absorbed, and this may be the explanation of the supposed disappearance of fibroid tumours, especially as it has been believed that these tumours sometimes disappear after pregnancy and labour. Given a case, however, in which these changes were suspected, we should hardly be justified in condemning a patient to prolonged invalidism in the hope that the tumour would eventually be absorbed. If necrobiosis occurs, then in all cases the tumour should be removed by operation; and from all published records as good a result may be expected as if the tumour were not in a degenerate condition.

Mucoid degeneration is the change in a fibroid which produces cystic cavities, such as used to be called fibro-cystic tumour of the uterus. It is not especially connected with pregnancy in the same uniform way as necrobiosis. Nothing definite is known as to the cause of mucoid degeneration, but it is usually ascribed to deficient blood supply to the tumour. This is quite incapable of proof, for it is not found only in pedunculated fibroids where partial strangulation might be expected, but quite as commonly in interstitial tumours. Macroscopically it produces rapid enlargement of the tumour and cavities containing yellowish, clear fluid. These cavities, at first small, run together and may produce large cysts, with ragged walls and often with strands of unaltered tissues running across them. These cysts are not the dilatation of pre-existing cavities, because they never have epithelial linings. Microscopically the change is seen to occur in the fibrous tissue first. The fibrils lose their character and become hyaline, whilst cells and nuclei disintegrate and form fluid droplets. Meanwhile the

muscle fibres, deprived of nutritive fluids, likewise disintegrate and add to the accumulation. The tissue thus changing never assumes the red colour above described, but has a dirty yellowish-white appearance, often semi-translucent, and breaking down easily under pressure of the finger. The production of cysts often complicates the diagnosis of these cases, for the tumour may be so large and may fluctuate so freely as to be indistinguishable

from an ovarian cyst. Apart from the rapid enlargement and consequent pressure on neighbouring parts, there are no important symptoms associated with this mucoid change. The menorrhagia of fibroids continues just the same when mucoid degeneration occurs, if the tumour is submucous or interstitial. The only treatment to be recommended is complete removal of the tumour and uterus if necessary.

ANÆSTHETICS.

THE VALUE AND DANGERS OF "A.C.E." AND "C.E." MIXTURES.

MIXTURES of alcohol, chloroform, and ether in various proportions have been extensively employed with the idea of obtaining an anæsthesia free from the inconveniences of ether and from the dangers of chloroform; and opinions of the most contradictory character have been expressed in regard to their use in practice. Not many years ago a well-known surgeon, at a discussion at a medical society, deliberately denounced A.C.E. as a "damnable mixture," whilst another extolled its value in all perilous cases. In this article an endeavour will be made to show that, as in most hotly debated questions, "both are right and both are wrong."

As a mixture is often selected for administration to patients in a condition unfavourable for any anæsthetic—thought to be unfit for either ether or chloroform alone—it is not surprising that some may be prejudiced by unfortunate experiences.

The chief theoretical objection usually stated is that in any mixture containing ether and chloroform the former evaporates before the latter, so that the anæsthetist, thinking himself safe, is apt to give an overdose of chloroform. In fact, as it has been said, that "Nobody knows what is being given."

Now laboratory experiments have indicated that in A.C.E., when carefully prepared, we have a true chemical compound, not a mere mechanical mixture, and that its vapour is not merely that of its separate components. Most authorities, however, regard the addition of alcohol as unnecessary, and use a C.E. mixture (chloroform 2, ether 3). Be this as it may, the objection may be obviated by proper precautions.

Nothing in the shape of a closed inhaler should be employed. With children, weakly or nervous patients, the administration may well be begun, and even continued, with lint, or a mask, such as Schimmelbusch's, kept at a short distance from the face. With others, a "Rendle's," or similar mask, should be used. This should not, as a rule, be closely applied, and should be removed altogether at frequent intervals. The air holes should not be obstructed, and the sponge should not be of very fine texture nor tightly packed. It should not be saturated at long intervals with half an ounce or more of the fluid. Small quantities should be dropped on it frequently, ensuring an almost continuous supply of fresh mixture. In long operations a mixture may well be given from a Junker's inhaler, the same care being taken to replenish the bottle frequently with small quantities.

The patient's breathing, colour, pupils, and pulse must receive the same unremitting attention as in giving chloroform. An overdose is indicated mainly by failure of respiration and over-dilatation of the pupils. Unless due to a sudden overdose (which should not occur), there is, however, in most cases quite sufficient warning to a watchful administrator. On the other hand, the signs of danger are sometimes so insidious that an inexperienced or careless administrator may find himself unexpectedly in a position of some anxiety. If the breathing tend to become shallow or hesitating, if at the same time the corneal reflex be absent, the pupils dilated and sluggish, and the muscles flaccid, the mask should be at once withdrawn, the lips and cheeks briskly rubbed, and traction made upon the tongue. Fortunately, even when respiratory movements cease, there is not that depression of the circulation which occurs under chloroform, and they are generally speedily resumed on artificial respiration being performed.

Neither this anæsthetic nor any other should be given indiscriminately as a matter of routine. It is suitable more particularly in the following cases:

Weakly infants and old people, to whom it is not usually advisable to give ether. Robust and full-blooded young and middle-aged adults, according to the writer's experience, are generally anæsthetised more quietly and effectually by A.C.E. than by a gas-and-ether or ethyl-chloride-ether sequence, and more safely than by chloroform. This is especially the case in free-living alcoholic subjects.

As noticed in previous articles, there are many operations in which ether is apt to cause difficulties to the surgeon and to interfere with the success of the proceedings and with the ultimate welfare of the patient. C.E. or chloroform is then preferable, and if the administrator be inexperienced the former should be chosen, particularly if the patient be feeble or the operation likely to be long, or to cause reflex functional disturbances.

C.E. is the best anæsthetic in most cases of respiratory difficulty, heart disease, and obesity, when nitrous oxide or ether are often dangerous. It may be used as a preliminary to ether for nervous patients, who make much objection to a closely fitting face-piece.

To sum up, the writer considers it an anæsthetic valuable as regards both convenience and safety, but only when properly given to a properly selected case.

THE ROYAL ARMY MEDICAL CORPS SECTION.

CAMPING DUTIES OF THE TERRITORIAL REGIMENTAL SURGEON.

In connection with the annual training camp of his unit, a number of special duties fall to the lot of the regimental medical officer, and with these he should make himself fully acquainted. One of the most important is the preparation and despatch of the preliminary indent for the medical equipment required while in camp. The date for sending in this requisition is usually announced in the command orders, as it has to be sent to the regular principal medical officer of the command, but through the administrative medical officer of the division.

The amount of medical equipment is laid down in Appendix XI. of the regulations (T. F.), and for a regimental unit of 500 men or more consists of one medical companion and water-bottle, and of two surgical haversacks and water-bottles. It should be applied for on Army Form I 1209, which should be signed by the medical officer. On each requisition there should be stated the following details: (1) The name of the unit for which the application is made; (2) where the unit is to be encamped; (3) the place where the stores are to be sent to; (4) the date and time of day at which they should arrive; and (5) to whom they should be delivered. Unless all the above particulars are given, the district loan equipment department cannot carry out the order correctly. Experience shows that regimental medical officers are not sufficiently careful in giving all the above details, thereby necessitating the return of the army form for its proper completion or correction, and thus causing both delay and extra work.

A medical officer may receive his camp equipment before leaving home or on arrival in camp, but wherever it is received he should at once check it with the lists supplied, so that any deficiencies may be at once noted and responsibility for them disclaimed, otherwise he will be held liable for them when the equipment is handed over at the termination of the camp. Another very important matter to note on arrival is the condition of the camp as to cleanliness and sanitary accessories, as was pointed out in the R.A.M.C. article of June 12 in this journal.

The daily routine duties of the regimental medical officer when in camp are varied and important, and call for a certain amount of system and method for their proper discharge. Fortunately he is not required to attend parades except in a professional capacity, exemption being specially given by paragraph 1096 of the King's Regulations. By another paragraph, 1097, he is also exempted from being present at target practice, it being sufficient to communicate with the commanding officer of the unit, saying where he can be found if required while the shooting is going on. The care of the sick of his unit is always a constant thought to the regimental medical officer, for the means at his disposal for dealing with them are limited. All the hospital

equipment he has at his command are two small bell tents, one of which can serve as an inspection tent or office, and in the other as an observation tent for any special case. He must see all men reporting sick and must visit them daily, as he is responsible for them from the moment they come under his care.

The procedure to be followed varies. Cases of temporary indisposition are usually treated in their own quarters (tents), but if the medical officer thinks it necessary, a case may be transferred to the observation tent. More serious cases that will probably be unfit for duty for some days are sent to an adjacent military hospital, or, in the absence of the latter, to any neighbouring civil hospital by previous arrangement with the P.M.O. of the command. On the other hand, should it be apparent that the patient is not likely to be fit for duty during the camping period, it is better to have him discharged and his return home arranged for. A medical officer should exercise special vigilance for cases of infectious disease in the early days of the camp. When it is remembered that the men of the unit come straight from their homes to camp, the chances of infection from so many different sources are considerable, and great watchfulness is necessary.

Whenever a man is found to be suffering from infectious disease, whether on joining the camp or subsequently, he must be detained and isolated, and notice at once sent to the medical officer of health for the district, with a view to the man's transfer to the local hospital for infectious diseases, as laid down in paragraph 310 of the Regulations (T.F.). The field days that are held during camp training furnish opportunities for the care of the sick while on the line of march, and the medical officer must remember that he is responsible not only for the professional treatment of the men admitted to the ambulance wagons, but also for their discipline, as laid down in paragraph 1908 of the King's Regulations.

Of greater importance even than the care of the sick is the preservation of health amongst the men of a regiment. To prevent disease must be the medical officer's constant aim, and it can only be attained by attention to details. The number occupying a tent, its ventilation, its cleanliness, are matters to be inquired into. Tents are best aired by tying up the "flies," and it is a good plan to sleep with them so. Daily removal into the open of the bedding and kits of the men is a most necessary procedure, if the weather allows, as the cleansing value of fresh air and sunshine cannot be over-estimated.

Scrupulous cleanliness in the tents, especially in connection with meals, and the avoidance of the dangerous and objectionable habit of spitting on the floor of a tent are two most important points to emphasise. A medical officer should satisfy himself also that the water supply does not suffer

any pollution during camp; that all waste water, especially greasy water, is suitably disposed of; that the excreta are properly dealt with, and that all rubbish, as well as the wastage from lines and tents, is burnt in an incinerator. Especially should the cook-houses where the food for the officers and the men is prepared be visited daily, and a very high standard of cleanliness amongst the cooks, waiters, and officers' servants should be insisted on in this department.

The hours of meals and the standard of cooking which is provided are matters that should not be overlooked, while on field days the arrangements for feeding the men should have special consideration, as they may not get dinner until very late in the day. In connection with field days every medical officer should remember that the fitness of his regiment depends on its marching powers, and that this in turn hangs very much on the state of the men's feet. Instruction on this subject, especially as to the treatment of blistered feet, should be given, and foot parades for the inspection of the men's feet should be held, while minor points, as the condition of the boots and socks, should not be beneath notice.

At the close of a regimental camp the medical officer will see that the medical equipment is

properly packed and returned to the district loan equipment store of the command, but he must first check it, and note all the deficiencies on the list which is supplied with each article. Having carefully recorded all losses on Army Form I 1230, it should be signed and dated by the medical officer and forwarded to the A.M.O. of the division. This, however, does not completely finish the camp duties of the medical officer. He has still to forward to the administrative medical officer of the division a report on the sanitary arrangements, the state of health and general working of the camp. This should be done at the end of the training, and should be an official document on the lines laid down in the King's Regulations.

In view of the necessity for this report a medical officer should make notes while in camp to help him in compiling his final copy, which should be sent in as soon as possible while matters are fresh in his memory, for the work of one of these temporary regimental camps is of a heterogeneous and varied nature, and necessitates daily memoranda being made if accuracy is to be attained. In conclusion, it may be noted that the remarks in this article are confined to duties in a regimental camp. They differ somewhat from those in a brigade camp, which are best considered separately.

DERMATOLOGY.

VENEREAL WARTS.

VENEREAL warts, or condylomata acuminata, are lobulated or papillated growths which may appear about the anus and genitals in persons of both sexes, usually in association with gonorrhœal discharges. They may occur, however, in pregnant women who have not been infected with gonorrhœa. They have nothing to do with syphilis, and are to be distinguished from mucous tubercles or syphilitic condylomata, which are always flatter, with no marked tendency to become lobulated, and nearly always associated with other signs of syphilis. It should be remembered, however, that children with congenital syphilis are liable to develop condylomata at the anus when they are about two years of age, and that these specific condylomata may become considerably lobulated. It is almost certain that the so-called venereal warts, or condylomata acuminata are a variety of verruca vulgaris, and it is probable that they arise as the result of a local infection by simple pus organisms. It is claimed by some writers that they are always preceded or accompanied by common warts upon the fingers or elsewhere.

In the female these growths occur chiefly about the anus, on the vulva, and on the contiguous parts of the thighs; the whole of this area may be more or less thickly covered with cauliflower-like excrescences. Often the growths are bathed in a foul-smelling secretion.

In the male the warts are situated in the furrow between the glans and the prepuce, but they may be so luxuriant in growth that the whole preputial sac is filled with vegetations, and they may even spring from the mouth of the urethra.

These growths may sometimes be mistaken for epithelioma, but they are to be distinguished by the absence of any infiltration of the base, and by the fact that there is no ulceration. They are generally very persistent, except in the case of pregnant women, when the growths usually disappear after the birth of the child.

Histologically these growths show a very marked increase in the number of cells in the prickle-cell layers, with abundant nuclear divisions as evidence of rapid multiplication of cells. The interpapillary processes are much hypertrophied, elongated, and branched, and between them are numerous dilated blood-vessels and lymphatics in the sub-epithelial tissues. This greatly increased vascularity accounts for the freedom with which the growths bleed if they are treated surgically or by cauterisation. The treatment of condylomata acuminata consists in the first place of procuring and maintaining absolute cleanliness of the parts. The growths and surrounding structures should be bathed several times a day with a weak solution of tar, or with a boracic acid lotion used hot, followed by powdering freely with a 2-per-cent. salicylic acid starch powder. In some cases continued treatment on these lines will suffice gradually to dry up the growths. But if these means fail it may be necessary to have recourse to surgical measures. The patient should be put under an anæsthetic, and the vegetations snipped off with scissors close to their base. Bleeding will be profuse, but it is readily controlled by pressure. After removal with scissors, the base should be cauterised with the thermo cautery.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

KING'S COLLEGE HOSPITAL.

THE KING AND QUEEN AT DENMARK HILL.

TUESDAY was one of the most beautiful days of the year. The weather was delightful, and the authorities and people of Camberwell deserve great credit for the beauty and taste displayed by the decorations which fitly framed the genuine enthusiasm with which they welcomed their Majesties as they passed through the district. It was a bold policy to determine to move King's College Hospital from Lincoln's Inn Fields to Denmark Hill, but the wisdom of the step was undoubted, and the proof that public opinion has been behind the authorities is magnificently expressed by the receipt already of £230,000 towards the £300,000 required. The fact that so large a sum had been raised encouraged the thoughtful to believe that those at present responsible for the administration of the affairs of King's College Hospital were worthy of the fullest trust, and that they possessed the gift of administration and capacity to control and successfully carry through the great enterprise involved by the policy of removal. This confidence was abundantly justified and increased, if possible, by the excellence of the arrangements for the ceremony on Tuesday.

It would be interesting to know what is the total number of foundation stones which His Majesty the King has officially laid during his life. Our experience of these ceremonies in the past has left an impression in our minds that, however important the commencement of a new building may be, the ceremony of laying the foundation stone is one which wise people may contentedly avoid. Tuesday's ceremony is the exception. The Hon. W. F. D. Smith, M.P., Mr. Charles Awdry, and those associated with them, who were responsible for the arrangements, deserve most hearty congratulations and cordial acknowledgments. The organisation under their direction was so perfect that everybody present must have been pleased and glad that they came.

The pavilion was an enormous one, kept full of fresh air, and the seating had been so arranged that everybody had an excellent view and ample space, so that there was no crowding, or discomfort, or disappointment. Everyone was able to find their seat, and the whole of the vast audience showed commendable punctuality in taking their places, so that everything was in perfect order long before the hour fixed for the arrival of their Majesties. The Guards' Band, which was excellent, gave pleasure to all present, and the grouping of the nurses, with Miss Ray, the sister-matron, in the centre, was not the least attractive feature of an assemblage which was brightened by the gay colours of the

hoods and gowns of the graduates, and by the beauty of many of the dresses, displaying a great variety of colours, worn by the ladies present. One feature of the initial proceedings before the ceremony was the amusing way in which a small boy patient dressed from head to foot in red, when brought on to the platform by one of the Sisters, who explained to him how he was to present a bouquet to Queen Alexandra, gradually shed his shyness and proceeded to adopt all sorts of unconscious attitudes to the great amusement of those present. The attendance included the professors and teachers, the physicians and surgeons, and several eminent authorities now living who have done so much to add lustre to the reputation of King's College and its Hospital; the Mayors of Camberwell, Southwark, and Deptford, the Masters of the Drapers' and Clothworkers' Companies, the Chairmen of St Mary's and the Middlesex Hospitals, the President of the Royal College of Surgeons, the Portuguese Minister, Lord Northcote, Sir Savile Crossley, Sir W. H. Watson Cheyne, Sir Henry Burdett, the Master of the Temple, the Secretary (Captain Tunnard), and the Secretary of the Removal Fund (Mr. George Heyer).

We have said that the organisation of the preliminaries was perfect, and the same adjective may properly be applied to the ceremony itself. Every word, as it fell from the lips of each speaker, was distinctly audible to all present. This in itself is a pleasant novelty which deserves recognition. The Bishop of Southwark prepared the audience by explaining to them the part they had to take in the ceremony, and their responses were hearty and added something to the completeness of the proceedings. Mr. Smith read the address exceedingly well, the Bishop's service possessed the merit of brevity and point, and His Majesty the King made, as those who read it will admit, a most excellent speech. The real interest of the ceremony, however, centred in the foundation stone laying itself. In performing this act His Majesty made it the occasion to show all present that if a thing is worth doing it is worth doing well. It was remarkable to watch the continuous interest of the King and his insistence upon the most accurate fulfilment of every item of the ceremony with perfect orderliness and in the most perfect manner. He laid the mortar with infinite care; he watched and directed the laying of the stone itself; he measured and approved it, and tapped it with the mallet with a dignity and gravity which must have impressed everybody. Then turning to the audience, with bowed head he uttered the

words: "In the name of the Father, and of the Son, and of the Holy Ghost, I declare this stone to be well and truly laid."

King Edward is, in a very real sense, the Father of his people, and the confidence which every class of his subjects, from the highest to the lowest, place in their Sovereign is well deserved. In all things and on all occasions he is kingly, and there is a thoroughness about His Majesty's discharge of his public duties which gives them not only a special charm but a special value, in the sense that on each occasion his actions drive home to all who witness them the soundness of the principle that everything that is worth doing is worth doing well.

King's College Hospital, and all who are responsible for its administration, are to be congratulated upon the success of Tuesday's proceedings. They may be taken as a model to be followed by all who have in future to organise similar ceremonies, for it is but just to say that they were in all respects perfect. We hope that the remaining £70,000 required to complete the building fund will speedily be forthcoming, for gentlemen who have shown the administrative gifts which the present position of the building fund and the organisation just described prove, deserve the confidence and support of all who have it in their power to give liberally to the support of hospitals, especially when they are careful before parting with their money to obtain guarantees that those who will have the expenditure of such gifts may be trusted to administer them with the maximum of economy and efficiency.

THE ADDRESS TO THE KING.

The following is the Address delivered by the Hon. W. F. D. Smith, Chairman of the Committee, to Their Majesties the King and Queen:—

"MAY IT PLEASE YOUR MAJESTIES,—I am privileged on behalf of the Removal Committee of King's College Hospital to offer our humble duty to Your Majesties, and to express our deep gratitude for the great honour which Your Majesties have conferred upon the Hospital by your presence upon this occasion.

"Six years ago the Committee of King's College Hospital were called upon to decide whether they would spend a large sum of money upon the old Hospital in order to bring it up to modern requirements, or whether they would undertake the construction of a new Hospital in South London, where a poor and populous district was sadly in need of Hospital accommodation.

"The Committee of 'King Edward's Hospital Fund' were strongly in favour of a removal scheme, and after a full enquiry into the changed conditions of the population surrounding the old Hospital, caused by the clearance of crowded and insanitary areas, and on account of the fact that numerous Hospitals already existed in a comparatively small area north of the river, it was decided to adopt the policy of the Fund and to construct a new Hospital in South London. This building when completed will give accommodation for 600 beds, and ample provision for all the special departments now necessary for the efficient working of every general Hospital.

"The site extends to over twelve acres, and in addition land on the south side, to the extent of more than thirty acres, has been acquired, partly by private liberality and partly by public funds, for a people's park, so that the Hospital will for ever have the advantage of an adjoining open space larger than any enjoyed by similar institutions in London.

"The Committee of 'King Edward's Hospital Fund' have given munificent donations, amounting in all to £27,000, to the Removal Fund, which has now reached a total of over £330,000. It is probable that the original estimate of the cost of removal will be somewhat exceeded, but the Committee have every hope that private generosity will provide them with sufficient funds to complete the building now undertaken, without trenching upon the capital sum realisable by the sale of the old Hospital site and building, but which it is of vital importance to retain for future endowment.

"As Your Majesties will have observed, the building of the out-patient, casualty, and some of the special departments is already far advanced, and it is hoped that in twelve months the whole of the building now contemplated will have been begun.

"I now have the honour to request Your Majesty to lay the foundation stone of the new King's College Hospital, and in so doing to perpetuate the connection with Your Majesty's Throne and Family which our Hospital by its style and title has the honour of commemorating."

THE KING'S SPEECH IN REPLY.

His Majesty made the following reply:—

"I thank you most heartily, on behalf of the Queen and myself, for your loyal address and for the cordial welcome you have offered to us. It gives me great pleasure to come to lay the foundation-stone of the new building of the hospital with which the Sovereign's name is connected, and in whose past work I have taken so deep an interest. For many years King's College Hospital has ministered to the necessities and alleviated the sufferings of thousands of my subjects in the centre of this crowded Metropolis. It was specially and closely associated with the great work of Lord Lister, who, in introducing the antiseptic methods in surgery, rendered an inestimable service to England and to all mankind. I remember also that your hospital sent out some of the most distinguished of its staff to do generous work among the sick and wounded in the South African war. Your committee's decision to abandon the old building and to remove the scene of your labours to a poorer and more populous district, where the need for a hospital was great and the field for its work wide, was a bold step, but I believe it was a wise and right one, and I congratulate the medical and nursing staff on the great opportunity thus given them for increased usefulness. The generous response made to the committee's appeal for funds shows how their decision has been appreciated by the public. I am glad that the fund associated with my name favoured the scheme in its inception and has given material assistance in carry-

ing it out. I am confident that other generous donors will come forward to supply the money needed to complete a spacious and well-equipped building. I can conceive no worthier object for benevolence than this. I assure you of my continued interest in your hospital and of the sympathy with which I shall watch its future progress. I cannot doubt that the

blessing of Almighty God will attend the work to be done by it in its new home."

After the Bishop of Southwark had offered up prayer, His Majesty laid the foundation-stone; the Benediction was pronounced by the Bishop, and afterwards a number of presentations were made to His Majesty.

THE INTERNATIONAL NURSES' COUNCIL.

MR. SYDNEY HOLLAND ON ITS NON-REPRESENTATIVE CHARACTER.

In the *Daily Telegraph* of July 21 a letter appeared from the Hon. Sydney Holland, Chairman of the London Hospital, from which we reprint the following extracts. These expose in generous terms the hollow nature of the claims of the "International Council of Nurses"—the promoters of the present International Conference of Nurses, to be representative of English nurses and English hospitals, and to speak authoritatively for British Nursing:—

"I have seen the authorised programme of the English ladies advertised to take a leading part or read a paper. Only one lady is a matron of a large training school, i.e., Miss Stewart, the matron of St. Bartholomew's. The others have little or nothing to do with the training of nurses in England. There is a lady, the matron of a private nursing home and institute at Bournemouth, but described in the programme under the magnificent title of president of the Victoria and Bournemouth Nurses' League! Another is a matron of a hospital in Leicester with about seventy nurses, who is described as president of the Leicester Infirmary Nurses' League. There is a matron from Southampton, a hospital with only

about forty nurses, who is described as president of the Royal South Hants Nurses' League. This 'Royal' is good. The name of this lady's hospital is 'The Royal South Hants and Southampton Hospital,' but whatever the hospital may be, the Nurses' League is no more Royal than I am. Then there are three ladies from Ireland, two of whom are certainly not matrons of hospitals, but one of whom is no less than 'vice-president of the National Council of Nurses of Great Britain and Ireland'—that sounds well—and in the chair is Mrs. Bedford Fenwick, late matron of St. Bartholomew's, who is 'president of the International Council of Nurses,' and now editor of a nursing paper which, so the programme says, 'is the official organ of the Congress—price 1d. weekly; please order from your newsagent.'"

"I am only concerned to tell these foreign nurses that but very few matrons, possibly only from three or four London hospitals, will take part in the proceedings of the Congress, and that as regards State registration, no less than sixty-seven matrons of London hospitals, 175 matrons of provincial hospitals, and 1,325 nurses have again quite recently signed a protest against it. These ladies from abroad will find that at all future Congresses, as at all past ones, the same ladies only will appear from England, with or without new titles."

NEWS AND COMING EVENTS.

DR. ISAAC MOSSOP has been appointed by the Lord Chancellor to the Commission of the Peace for the City of Bradford.

MR. F. N. DOUBLEDAY, L.D.S., R.C.S.(Eng.), has been awarded the Guy's Hospital Travelling Scholarship of the value of £100.

THE University of Geneva has recently conferred upon Lord Lister the honorary degree of Doctor of Medicine in recognition and appreciation of his epoch-making contributions to surgical science and practice.

THE Lord Lieutenant of Bedfordshire has appointed Surgeon-Lieut.-Colonel Rowland Hill Coombs, M.D., of the 3rd battalion the Bedfordshire Regiment (Special Reserve), to the post of Deputy Lieutenant of the County.

PROFESSOR WILLIAM STIRLING, M.D., Dean of the Medical Faculty, pro Vice-Chancellor of the University, and Professor of Physiology in Manchester University, has been nominated to represent the University as its official delegate at the forthcoming quinqucentenary of the University of Leipsic, to be celebrated from July 28 to 31.

A General Court of Governors of the East London Hospital for Children, and Dispensary for Women, Shadwell, E., will be held at the Hospital on Monday, July 26, at 4 o'clock in the afternoon, to receive a report on the general state of the institution, from the Board of Management, and transact other business.

THE following awards of Fellowships have been made in connection with the recent degree examinations at the University of Liverpool:—Robert Gee Fellowship in Anatomy, R. H. Mole, M.D.; Holt Fellowship in Physiology, C. H. H. Harold, M.B., Ch.B.; Thelwall Thomas Fellowship, W. W. Mackarell, M.B., Ch.B.; Ethel Boyce Fellowship, W. R. Pierce, M.B., Ch.B.

THE honorary degree of M.D. of the University of Dublin has been conferred upon the following eminent English and Scottish medical men:—Sir Alfred Keogh, M.D., K.C.B., Director-General of the Army Medical Service; Dr. W. Hale White, senior physician to Guy's Hospital; Dr. W. P. Herringham, physician to St. Bartholomew's Hospital; Dr. G. A. Gibson, physician to the Royal Infirmary, Edinburgh; and Dr. G. Redmayne Murray, Professor of Pathology in Victoria University, Manchester.

ROYAL ARMY MEDICAL COLLEGE PRIZES.—The War Office has issued the following list of prize-winners at the recent examination at the termination of the junior course at the Royal Army Medical College:—Lieut. H. S. Ranken, R.A.M.C., the Herbert, De Chaumont, Tulloch Memorial, Ranald Martin, and Marshall Webb prizes; Lieut. J. A. Manifold, R.A.M.C., the 1st Montefiore prize; Lieut. C. L. Franklin, R.A.M.C., the 2nd Montefiore prize; Lieut. A. M. S. Jukes, I.M.S., the Parkes Memorial prize; and Lieut. B. Gale, I.M.S., the Fayrer Memorial prize.

THE following appointments have been made to the medical staff of St. John's Hospital for Diseases of the Skin, Leicester Square, London, W.C.:—Dr. William Griffith, M.B., Ch.B. Victoria, M.R.C.P. Lond., has been appointed Assistant Physician; Dr. C. A. McBride, M.D., C.M. Toronto, L.R.C.P., L.R.C.S. Edin., has been appointed Casualty Officer; and Miss Louisa Woodcock, M.D. Lond., B.S., has been appointed Clinical Assistant.

A REUTER'S telegram from Rio de Janeiro of July 17 stated that an announcement had been made that day by Dr. Oswaldo Cruz, Director-General of the Sanitary Service, at the Rio de Janeiro Academy of Medicine to the effect that the bacillus of smallpox has been discovered in the course of bacteriological researches carried out at the Oswaldo Cruz Institute by Drs. Henrique Beurepaire de Aragao and Prowazek.

At a meeting of the Manchester Infirmary Board on July 13, the following letter addressed to Sir William Cobbett, Chairman of the Board of Management, the Royal Infirmary, Manchester, from the Right Hon. R. B. Haldane, was read: "I am commanded by the King to express to you the genuine pleasure which the inspection of the Royal Infirmary this afternoon gave to himself and to the Queen. The admirable scientific organisation, the well-considered planning of the building, and the evidences of a high standard of medical and surgical attainment in the staff gave their Majesties the sense that they had visited an institution of which Manchester may well feel proud."

THE eleventh South African Medical Congress will be held in Durban, August 2 to 7, 1909. His Excellency Sir Matthew Nathan, K.C.M.G., R.E., the Governor of Natal, will open the proceedings on Monday August 2. The President of the Congress is Dr. H. A. Dumat, and the Vice-Presidents Drs. W. Watkins-Pitchford and W. J. Hill. The Hon. Secretary is Dr. P. Murison, and the Hon. Treasurer Dr. G. L. Bonnar. The work of the Congress will be divided among six sections, which are respectively Medicine, Surgery, Obstetrics and Gynaecology, Public Health, Ophthalmology, and the other special subjects grouped together.

THE BRITISH MEDICAL ASSOCIATION.

THE agenda published for the Annual Representative Meeting of the British Medical Association, due at Belfast on July 23, contained a supplementary report dealing with matters which have arisen since the Annual Report was published. The suggested recognition of a special class of "consultants" is favourably considered in a special report upon this question by the Central Ethical Committee. The Committee suggest that such a class, distinguished by the fact that they confine their practice to the treatment of patients in co-operation with other practitioners, would be in the best interests of the profession. Some such definition of the scope of the work of the two chief branches of the profession would, in their opinion, tend greatly to reduce friction and jealousy between medical men; and, by promoting harmony and co-operation within its ranks, would advance the honour and interest of the profession. They recommend that their report should be referred to the Divisions with a request that each Division will express an opinion upon this proposed recognition of a special class of consultants on the lines indicated; and that each Division, if favourable to the main proposal, will further agree to the drawing up by the British Medical Association of regulations for the conduct of the practice of such a class.

PRINCESS CHRISTIAN and Princess Victoria of Schleswig-Holstein attended the "View Day" of the Frimley Sanatorium and Convalescent Home attached to the Brompton Hospital for Consumption on Saturday last, July 17. The Sanatorium was opened five years ago by the Prince and Princess of Wales, and the building contains 150 beds, of which 104 are for men, 42 for women, and four for young children, all now occupied. Besides these, 150 ex-patients, most of them in excellent health, were present. The Princesses were received by General Lord Cheylesmore (Chairman of the Committee), Mr. St. Croix Rose (Vice-Chairman), Dr. Robert McGuire (Chairman of the Medical Committee), Dr. M. S. Paterson (Medical Superintendent of the Sanatorium), and Mrs. Paterson, Miss Lloyd-Still (Lady Superintendent of the Brompton Hospital), and Mr. Frederick Wood (Secretary), who conducted the Royal visitors through the wards and afterwards through the grounds, in which, among other useful works, a concrete reservoir has been constructed entirely by the male patients, by whom the whole of the grounds are kept in order, with the result that no money is spent on labour at the Sanatorium.

ARRANGEMENTS FOR THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION AT BELFAST.

THE seventy-seventh annual meeting of the British Medical Association is just commencing at Belfast as we go to press, and arranged for Friday, July 23, and the following six week-days. Sir William Whitla, Professor of Materia Medica and Therapeutics, Queen's College, Belfast, is the distinguished President of this year's Congress.

Fifteen Scientific Sections have been arranged, and will meet daily from Wednesday to Friday in the Queen's College at 10 A.M., namely: Anatomy and Physiology, Dermatology and Electro-Therapeutics, Haematology and Vaccine Therapy, Diseases of Children, Navy, Army and Ambulance, Hygiene and Public Health, Laryngology, Otology and Rhinology, Medicine, Obstetrics and Gynaecology, Ophthalmology, Pathology, Pharmacology and Therapeutics, Psychological Medicine, Surgery, and Tropical Medicine. The programmes throughout promise particularly interesting discussion, owing to the large attendance of men of eminence from foreign countries and various parts of the British Empire.

On Tuesday next, July 27, at 2.30, Sir William Whitla will be inducted to the Presidential Chair, while at 8.30 P.M. that evening he will deliver his Presidential Address in the Assembly Hall, Belfast. On Wednesday, July 28, at 2.30 P.M., Dr. R. W. Philip, F.R.C.P. Edin., will deliver an address on Medicine in the Library, Queen's College. On Thursday, July 29, at 12.30 P.M., the address on Surgery will be delivered in the Library, Queen's College, by Mr. Edward James Barker, F.R.C.S. On Friday, July 30, at 12.30 P.M., Sir John W. Byers, M.D., will deliver an address on Obstetrics in the Library, Queen's College, while at 8 P.M. a popular lecture will be delivered by Dr. J. A. Macdonald. Finally, at 8.30 o'clock of the same evening, the termination of the Congress will be celebrated officially by a Reception, in the Botanic Gardens, of the assembled members, at the invitation of the President and local members of the Ulster Branch.

We are indebted to the Secretary of the British Medical Association for his courtesy in forwarding us the above particulars of special items in the programme arranged for the present meeting of the Association. We anticipate an unqualified success for this year's gathering at Belfast.

NURSING ADMINISTRATION.

THE "ONE PORTAL" PRINCIPLE IN NURSING.

THE one thing to be desired in the present stage of the movement in favour of registration is that free discussion on the subject should be promoted from all points of view. The very complex problems to be solved will not melt away under vehement denials that they exist, nor will the far seeing objections of women who have spent their lives in training nurses be overcome by tenacious declarations that these objections are based on ignorance and cowardice. All that kind of talk needs to be got rid of. It has to be clearly brought into the open that the registration of nurses in this country is exposed to many and grave drawbacks, and if it is to be brought about at all attention must be concentrated on the steps necessary to provide against passing from an admittedly imperfect state of affairs in the present, to one still more unsatisfactory because cast in an iron mould by legislation in the future.

Nothing has done more to make propositions for legislation acceptable than the eminently sane and practical discussions which have taken place on the subject over the border. The Association of which Lord Inverclyde is President has succeeded in uniting a very strong body of nursing opinion in Scotland in favour of a measure for regulating the nursing profession, and it is the desire of many who have hitherto been altogether discouraged about the proposed Bills to see an equally representative association formed from among hospitals south of the Tweed. At a conference recently held in London the principle of a single portal system of admission to the register for the whole of the United Kingdom was assented to, and there can be no doubt that if unity can be attained without the necessity for rigid uniformity, there would be a considerable gain for the nurses and the public. But it is necessary to scrutinise very closely the exact meaning of the expression which is being so freely used this week, "the single portal."

A central registering body is not incompatible with the principle of administrative decentralisation in regard to the examinations. The inspection and supervision of examinations by this central body need not carry with it an inflexible system of uniformity such as is practicable in the case of midwives trained for a few months only, and for one special branch of work. If the one portal system is to be taken as meaning that one set of papers is to be the passport for the nursing profession under whatever system, and in whatever locality the candidate may have been trained, we unhesitatingly maintain that the interests of the profession must inevitably suffer, and the standard of nursing deteriorate under its effects. Who can compare the experience afforded in the large clinical hospitals which can fully occupy their pupils during a four years' course, to the training given in small provincial hospitals which are nevertheless capable, especially when encouraged by competition and inspection, of turning out nurses thoroughly com-

petent to undertake the ordinary duties of the sick-room? It is neither natural nor desirable in the interests of nurses trained under such widely different conditions as regards opportunity, to submit them to precisely similar examinations, as the passport to their profession. If the examinations are brought down to the level of such mediocre attainments as may be rightly expected from the one class of candidate, they cannot fail to discourage the other, who will rebel against the extra year's training, and other requirements tending to make British nurses the best trained members of the profession in the world. Who would not see the absurdity of setting the same examinations before the pass candidate of the schools and the honour students in classics, mathematics, medicine or science? The varying examinations all admit to the degree of the university, but no purpose would be served by pretending that the standard of knowledge was the same in all cases. It is undoubtedly desirable that nurses should have some practice in obstetric cases. But is it practicable to insist as is done in New York that each candidate shall have been afforded the opportunity of nursing a given number of abdominal cases as an essential preliminary to examination? Suppose that as a natural consequence of improved methods of midwifery the abdominal sections become rarer as time goes on? This is well within the bounds of hope, but are small training schools to be disqualified because women improve in health? Yet if obstetric work is excluded altogether from the examinations, it will be hard to keep those wards up to their present pitch of excellence. We mention this merely as an example of the many minor difficulties which crop up whenever the syllabus of one uniform examination is brought under discussion. We want before everything to keep the present splendid work done in the major training schools from suffering injury. We want, and this is scarcely less important, to improve the smaller training schools, and utilise all the material existing under a bewildering variety of organisation for the training of nurses. The two are incompatible under any uniform system of examination, and hence we deprecate the attempt to make this impracticable feature of uniformity the basis of legislation. It is on this rock that the American systems of registration have split. It ought to be clearly discerned by all who believe the true status of a nurse to be bound up indissolubly with the status of her training school.

BOOKS RECEIVED.

SHAW AND SONS.

"Symptoms and their Interpretation," by James Mackenzie, M.D., M.R.C.P.

BAILLIÈRE, TINDALL, AND COX.

"The After-Treatment of Operations"—III. Edited by P. Lockhart Mummery, F.R.C.S.

HENRY KIMPTON.

"Practical Text-book of Midwifery"—IV. Edited by Robert Jardine, M.D., F.R.C.S., etc.

LITERARY NOTES.

IN a recent review in these columns of one of the Oxford Medical Publications it was stated that the variety of *format* adopted in this series necessitated the volumes being separated on the purchaser's bookshelves. With the doctor's, as with every private library, indeed, there is always the question as to whether the arrangement of the books shall follow size or subject. The former plan has good precedents: in the top rows the owner's eye can find affectionately, as Mr. Austin Dobson sings, "the dear and dumpy twelves"; while nearer the floor, as is fitting, come the weightier volumes—like those Charles Lamb wished to strip in order to clothe his favourites better. The second arrangement, more convenient for frequent reference, has obvious drawbacks, especially in the case of periodical medical literature, a very varied selection of which is apt to be made by those who join to the investigator's insatiable curiosity concerning his own subject something of the pride of the collector in completeness. *Virchow's Archiv*, say, with its mere eight by six dimensions, makes but a poor prop for some limp, lanky reprint of a Royal Society memoir; and yet the two may often need to be consulted together. Indeed, there is little to charm the bibliophile in the appearance of a useful small medical library.

THE LEEDS HEALTH CONGRESS.

A HEALTH CONGRESS, organised by the City and University of Leeds, with the co-operation of the Royal Sanitary Institute and the Royal Institute of Public Health, was opened at Leeds on Saturday evening last, and continues open throughout the present week. Over 1,000 delegates, representing nearly every branch of medical and sanitary science, were received at the University by the Lord Mayor (Alderman F. J. Kitson) and Lady Mayoress of Leeds.

The Presidential address was delivered by Colonel T. W. Harding, of Leeds. He said that division of labour in scientific matters whereby individual workers applied themselves to the investigation of some detail or group of details, whilst possessing great advantages, also was associated with a certain degree of danger. The limited vision of the specific worker might obscure wider issues and even disturb his sense of proportion of the particular parts he was considering. But while he appreciated the great progress of sanitary science, he doubted whether we were healthier than were our fathers, because we had lost some conditions that were simple, rational, and good. The population in their day was small; the great bulk of the people worked in the fields and rose with the sun; the woman's place was in her home; the children were breast-fed and brought up at their mother's knee; their education was of the simplest, mostly in the church, and the boys were content to walk in their fathers' footsteps. The striking difference in the old conditions as compared with the new was that in former days 75 per cent. of the population was rural and only 25 per cent. urban, while now 77 per cent. was urban and only 23 per cent. rural. Phthisis was being brought under control by administrative and educational measures, but still had a terrible mortality. The birth-rate had declined since 1880. Some of the influences of this were obscure, but they were not all vicious, and in so far as early, improvident marriages had been reduced, it had been to the public and private advantage. He warmly approved of physical exercises in schools, and he hoped to see military drill and discipline for boys followed later by universal military training.

LIABILITY OF HOSPITALS.

ST. BARTHOLOMEW'S CASE: APPEAL.

IN the Court of Appeal on July 13, before the Master of the Rolls and Lords Justices Farwell and Kennedy, the case of "*Hillyer v. Corporation of the City of London*" was reconsidered. As reported in *THE HOSPITAL* at the time and since commented upon, the defendants were sued, as the Governors of St. Bartholomew's Hospital, by Mr. William H. Hillyer, a member of the medical profession. The plaintiff alleged that while undergoing an examination under anæsthetics on the operating-table of the hospital his left arm, by the negligence of the defendants or that of their servants, was allowed to come into contact with the hot-water tins used for heating the table, and as a result he was paralysed in that arm, while the right arm was also injured. The defendants denied liability, and pleaded that, if it was not an inevitable accident, there was no relation of master and servant existing between themselves and those engaged in the examination which made them responsible in law.—Mr. J. B. Matthews, in support of the appeal by the plaintiff against the verdict of Mr. Justice Grantham, who, it will be remembered, refused to send the case to a jury, said that at any rate there was a *prima-facie* case made out by the plaintiff fit for the consideration of the jury. The judge, therefore, ought not to have ruled as he had done, and the plaintiff was entitled to a new trial. Counsel referred at considerable length to the evidence, and after Mr. McCall, K.C., and Mr. H. C. Marks had pleaded in support of the judgment, Mr. Matthews replied.—The Master of the Rolls (after consulting with the Lords Justices) finally said: "We think we must take time to consider this case, as the question of the respondents' liability is a very important one."

WE received some little time ago from Messrs. Coleman and Co., of Norwich, contractors to the Royal Army Medical Corps, a complete set of their useful "*Wincarnis*" Motor and Cyclists' Sectional Maps of England and Wales. Now that the holiday season is upon us we may appropriately draw attention to the series, which consists of 16 separate maps, each 9 inches by 6½ inches in size, and clearly printed on stout paper. These convenient little sectional maps can be obtained by readers on application to the "*Wincarnis*" works. Any one of the 16 sections will be sent on receipt of a postcard, and the complete set will be sent to any address on receipt of two penny stamps. The scale is 10 miles to the inch, and all the principal roads are clearly marked in red, while railway lines are also shown. The series reflects credit upon Messrs. Fletcher and Son, Ltd., map-lithographers, also of Norwich, whose work it is.

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SATURDAY, JULY 31, 1909.

EXPLORATORY LAPAROTOMY AND ABDOMINAL CANCER.

A PHYSICIAN has unkindly said that a surgeon's idea of abdominal diagnosis is to "look inside and see." The charter of the Royal College of Physicians of London has a phrase beginning "Whereas medicine doth comprehend surgery," or words to that effect, and there is a sense in which this statement remains as true as when it was indicted. For the surgeon of to-day is a good physician who has educated his fingers and established an imperturbable control over what is vulgarly—and not altogether inaccurately—known as his "nerve." It must be borne in mind, then, that an exploratory or diagnostic laparotomy, the "test-laparotomy" of the Germans, is not undertaken to find out what is the matter with the patient. It is employed as a means of supplying certain additional data without which the internist finds himself unable to proceed to a rational diagnosis; it is the last step, not the first, in demonstration of the lesion, and, moreover, it is the open road to treatment. However trite all this may sound, it would seem that unless kept constantly before us there is danger of too ready and too careless resort to opening the abdomen. Anæsthetics and antiseptics have removed the wholesome restraint of serious risk: but it would be a thousand pities if too light-hearted employment of an invaluable method should imperil the chances of teaching the public a proper appreciation of its importance and necessity.

It is, however, for a more extended use of exploratory laparotomy that we wish to enter a plea. It is only too well known that the early stages of cancerous processes in the gastro-intestinal tract do not manifest themselves by demonstrable or even recognisable symptoms. On the other hand, it is equally well known that only in the early stages can effective measures be taken. Nearly a hundred successful partial gastrectomies are now on record, and it has long been common knowledge that enterectomies may effect cures in cases of intestinal new growth; but it has also been proved conclusively that the fancied immunity of these neoplasms from glandular metastasis—at any rate until a late stage—has been overstated; and there is all the more urgency for early surgical interference. The great majority of cases of intestinal new growth eventually reach the stage of

intestinal obstruction, and every hospital surgeon has time after time to perform urgency operations in cases that might have been "cured" by operations of expediency at the proper time.

Unfortunately "the proper time" is generally a time when the patient does not realise he is gravely ill; at a time, in fact, when he is not gravely ill, so far as symptoms go; when perhaps it is nothing more than the development of progressively severe constipation, an occasional attack of looseness of the bowels, some abdominal pain of colicky character, slight distension, borborygmi, and perhaps an attack of vomiting or nausea, or some such symptom-complex, which suggests to the medical adviser the possibility of actual narrowing of the bowel. Or, again, there may be a train of slight symptoms suggestive of gastric disorder; but whilst here something may often be felt, it is seldom so with intestinal new growth.

Still, the surgeon is not to be called in on mere suspicion or surmise. But when the reports of chemist, clinical pathologist, and radiographer have aroused suspicion, his early assistance is imperative. It is of the utmost importance that the surgeon setting out upon an exploratory laparotomy should have every detail of the existing evidence at his finger ends. It is by no means easy to explore the whole length of the intestinal canal through a median laparotomy wound, and small tumours may be missed unless the most systematic and careful examination be made. If, for example, there has been suspicion of obstruction in the upper part of the small intestine, and upon opening the abdomen the colon and duodenum are found closely bound to the gall-bladder by tight adhesions, it becomes of the first importance for the operator to know whether the vomit has contained bile. If bile has never been present, it is improbable that the stricture is above the papilla, and the surgeon must look elsewhere for the actual cause; or at least he should satisfy himself that there is no other obstruction lower down before he closes the abdomen. If he has been wise, and circumstances have permitted, he will have observed previously the passage of a bismuthised meal with the aid of the x-rays and screen.

But such examples might be multiplied indefinitely. Moreover, when direct inspection has done its part in settling the diagnosis, it does not mean merely that curiosity is satisfied. Where certainty is reached, it very often means prompt cure by the only available means, removal. Even where doubt is not dispelled the circumvention of some mechanical disability or the avoidance of the "detestable colostomy" may still be feasible. The point is that many patients have far more to gain than to lose by submitting to operation, and it becomes the duty of medical men to put this before them at the right

time. When obstruction has set in the patient does not need to be told that an operation is necessary: he knows it himself. And if he should refuse an exploratory operation at a time when cure is possible, it is not the doctor's fault if time should at last convince the unhappy patient that he has thrown away his only chance of recovery against the advice of his medical attendant. If, on the other hand, no dire results follow exclusion of the surgeon, the doctor's reputation will not suffer, if he has explained the matter from the first in lucid terms and the right spirit.

ANTI-VACCINATIONISTS AND MODIFIED SMALLPOX.

THE Secretary of the National Anti-Vaccination League has sent us a marked copy of its official organ, the *Vaccination Inquirer*, with a letter asking us to study the extracts there printed from the report of the Medical Officer of Health for Leicester. The moderation and courtesy which are displayed in this note we acknowledge with pleasure; we could wish that the same might be said of the contents of the journal which has been forwarded to us. On reading through it there appear on every page, almost in every paragraph, those peculiar misconceptions and mistakes which arise inevitably when ignorant and prejudiced people begin to talk at large about a very intricate science, such as that of medicine, of which their practical acquaintance is absolutely nothing. The *Inquirer* abounds in the familiar denunciations of vaccination and of all forms of serum or vaccine therapy as "filthy iniquity," "loathsome art," "unclean fraud," and the like; and does not scruple to insinuate and to assert broadcast that vaccination is upheld by the medical profession solely because it affords fees, and in spite of the fact that it causes great suffering and much intercurrent disease. It is this sort of thing which makes impartial people, whether doctors or not, decline to take seriously the anti-vaccinators. Do let the ground be cleared of all cant about loathsome acts and the like; let it be recognised that culture media are no more and no less filthy than consommé soup, that bacteria are no more and no less unclean than the yeast with which bread is made, and that serum is no more and no less loathsome than beefsteak. Then there will be common ground to serve as the basis for some useful discussion.

As for the marked page, dealing with Leicester and the large proportion of unvaccinated there, the Secretary of the League surely does not imagine that the extracts given from the medical officer of health's report reveal anything very novel. It is no news that the protection afforded by vaccination is tem-

porary only, and that vaccination during infancy protects no longer than up to ten or twelve years of age. That, one would think, is chiefly an argument for re-vaccination at intervals. "Experience of smallpox in Leicester seems to show," continues Dr. Millard's report, "that it is essentially the adult population which is the principal factor in the spread of the disease"; that part of the population, in fact, which is least efficiently vaccinated. The next quotation is one dealing with the difficulty of detecting the very mild variety of smallpox which is commonly exhibited when vaccinated persons do chance to acquire the disease: the remark is made that such cases are so difficult to diagnose that sometimes they actually conduce to the spread of infection for that reason. But the League cannot really have it both ways: if their interpolated headline in thick type, "Vaccinated Persons Spread the Disease," is allowable, then they must admit that modified smallpox is modified in virtue of previous vaccination, and they must also take the word of smallpox experts that vaccination not only modifies the disease to this degree, but also that it very largely protects from and prevents it altogether. We are willing, aye anxious, to consider every particle of evidence for and against vaccination: the medical profession is not committed to any preconceived opinion on the merits of this or any other form of treatment on the ground that it is or is not "filthy," but only wants to give the best advice to those who seek health and the prevention of disease. The profession is prepared some day, when the biology of smallpox has been worked out, as it assuredly will be, to adopt a more scientific prophylaxis based upon bacteriology in place of the present system of empiricism. But until then we are not prepared to let go our hold of the best anchor we have, and especially we are not to be deterred by the grossly offensive suggestion that to earn a half-crown fee medical men are willing to connive at and actually to commit what they know to be an immoral and barbarous crime.

ANNOTATIONS.

The Belfast Medical Congress.

It is just twenty-five years ago since the British Medical Association last paid an official visit to the city of Belfast. The President of the Association at that meeting was the late Professor Cumins. Now, a quarter of a century later, the President of the seventy-seventh annual meeting, which began on Friday of last week, and continues open until the last day of the present week, is the distinguished physician and therapist, Sir William Whitla, M.D., LL.D., Professor of *Materia Medica* and Therapeutics in Queen's College, Belfast, and Senior Physician to the Royal Victoria Hospital. The Association is happy in its choice of a President. Sir William Whitla, whose term of office begins with this great meeting of British medical men from all parts of the Empire, is scarcely less well known and respected by the profession beyond the shores of Erin than amongst his colleagues in Belfast and the medical practitioners of Ireland. The eight editions of his "*Manual of Materia Medica*," and perhaps more especially the "*Dictionary of Treatment*," which has passed through even more foreign than English editions, have already secured for their author a permanent reputation in medical literature and throughout the ranks of the profession. Sir William Whitla has held many presidencies in his time, and indeed as long ago as 1887 he was sectional president for therapeutics of the British Medical Association at its annual gathering; but the present headship of the 1909 Belfast meeting, in the great city with which he has been so closely and honourably identified for so many years, will probably seem to him, as it does to us, the highest of these distinctions with which his colleagues have honoured him. The proceedings of this year's meeting began on July 23 in the Assembly Hall at Belfast. At the general business meeting the chair was occupied by Dr. Sinclair White, of Sheffield, who succeeded the late Mr. Simeon Snell as president when death interrupted the yearly tenure of office; and at the subsequent representative meeting Dr. J. A. McDonald, of Taunton, presided. At the outset there was a large attendance from all parts, and it is estimated that at least 800 delegates have been present during this week's deliberations and social festivities. Fifteen scientific sections in all were arranged by the conveners of the 1909 meeting; and as we go to press their special papers and discussions are being continued daily in the Queen's College at 10 o'clock. The sections include Anatomy and Physiology; Dermatology and Electro-Therapeutics; Hæmatology and Vaccine Therapy; Diseases of Children; Navy, Army, and Ambulance; Hygiene and Public Health; Laryngology, Otology, and Rhinology; Medicine, Obstetrics and Gynæcology, Ophthalmology, Pathology, Pharmacology and Therapeutics, Psychological Medicine, Surgery, and Tropical Medicine. The programmes have given rise in many cases to interesting discussions, and these have gained much from the presence and active participation of men of eminence from foreign countries and various parts of the Empire. We hope to deal further and in some

detail with the three leading professional addresses of the annual meeting, arranged for Wednesday, Thursday, and Friday of this week, and each entrusted to a leading authority upon medicine, surgery, and obstetrics respectively; and with the popular lecture on Friday evening, July 30, in the hands of the chairman of representative meetings, who has already conducted with skill and discretion the medico social, medico ethical, and medico political discussions to which these early meetings were devoted.

A Hazardous Operation.

SOME time ago the suggestion was put forward that in cases of very great hypertrophy of the heart from valvular disease, with that powerful heave against the præcordia which is familiar in these conditions, some benefit might be expected to accrue from the removal of portions of the ribs covering the hypertrophied ventricles. The operation, known under the name of cardiolysis, or alternatively as cardioplasty, has been especially advocated for adherent pericardium combined with valvular disease, for which it was originally devised by Brauer; and it is claimed that the relief to the heart by the greater freedom accorded to its movements is very considerable. Those who have worked at this subject in Germany seem to think that it is both easier and more advantageous to the patient not to remove the periosteum. In this country attention has been directed to the matter by Morison,* but the number of cases submitted to operation hitherto is said to be only fifteen. One of the dangers connected with this procedure which must be ever kept in mind is illustrated by the unfortunate outcome of an attempt to perform it on July 13 in one of the London hospitals. The patient was a boy of thirteen who had been under treatment for many months for cardiac valvular disease complicated by dropsy, following on an attack of scarlet fever. The operation of cardiolysis was suggested as a suitable one for his condition, and was agreed to by the boy's parents. Unfortunately the combination of disadvantages under which he laboured rendered him so susceptible to anæsthetisation that he died after the exhibition of no more than 2 or 3 drachms of A.C.E. mixture given on a single fold of lint upon a Schimmelbusch frame. At the subsequent post-mortem examination there was revealed mitral stenosis and regurgitation, tricuspid regurgitation, and aortic regurgitation; and the pathologist also found signs of the status lymphaticus. It certainly seems rather strange that a child suffering from the latter condition should survive an attack of scarlet fever and subsequent acute carditis, only to succumb under the influence of a minute dose of so much less formidable a poison. Be that as it may, it is evident that those for whom the operation of cardiolysis is advised are necessarily bad subjects for anæsthesia, and this fact must be very carefully taken into account by surgeons and physicians when asked for an opinion as to the possible advantages and possible risks of the operation.

* *Lancet*, July 7, 1908.

MEDICAL OPINION AND MOVEMENT.

AN exhaustive inquiry into the Geographical Distribution of Diabetes Mellitus appears in the *Medical Chronicle*, from the pen of Dr. R. T. Williamson. While diabetes can and does occur in all climates and races, statistics and experience prove that its frequency varies very greatly in different parts of the world. The greater incidence of the disease upon Jews than upon European races has long been known; but it may not be generally appreciated that their death-rate is six to seven times that among Gentiles from this malady. Such at least is the case in Buda Pesth, where the statistics have been very carefully worked out; and the same holds good of Frankfurt also. The tendency to obesity in middle-aged Jews may possibly be correlated with the frequency of diabetes. In America negroes suffer decidedly less than white people, though the discrepancy is getting less as their habits and diet approximate to those of the latter. Hindus, Cinghalese, and Maltese suffer far more than European races, broadly speaking, whereas in Chinese on their own native diet, and in Eskimos, the malady is hardly ever seen. Thus a strictly carbo-hydrate diet cannot be regarded as necessarily disposing to diabetes; yet all the same, there are reasons for believing that many of those affected might not have developed glycosuria had excess of sugar in food or drink not been indulged in. It is suggested as worth inquiry whether a possible cause of the rapid increase of diabetes of late years is the widespread adoption of beet sugar in place of cane sugar.

THE Correct Surgical Treatment of Abscesses in Hip Disease is still a matter concerning which individual surgeons differ widely. Dr. H. Schwatt in *International Clinics* lays down the following conclusions. Prompt evacuation of pus as soon as diagnosed does not rest upon a rational foundation, and should not be resorted to; but, at the same time, absolute non-interference is not to be made an invariable rule. The formation and extension of abscess can be averted in a large proportion of cases by effective treatment of the joint disease. To this end he recommends principally fixation of the joint, rest in bed with extension, tonic drugs, diet, and good hygiene. Operative interference when necessary is not to be regarded as a curative procedure for either the abscess or the underlying disease, and is usually followed by mixed infection. Interference with the wall of the abscess should be avoided on account of the danger of disseminating the tuberculous process, and therefore operation should consist simply of incision and evacuation of pus. Closure of the wound by suture may be attempted, but permanent primary union is not obtained as a rule, and in the majority of cases it is probable that drainage would be beneficial to the bone disease. Mixed infection is to be guarded against by scrupulous asepsis at operation and in the after treatment. The author adds a plea for a more conservative attitude towards this complication of hip disease than at present prevails.

AN interesting article on Ruptures of the Œsophagus appears in a recent number of the *Beiträge zur Klin. Chirurgie* from the pen of Petren. The author recognises two classes of rupture—that which is the result of pathological conditions, such as cancer, ulceration, suppuration, aneurysm, etc., and that which follows trauma, without any pre-existing disease. It is with this traumatic variety that the author is chiefly concerned. He has found five cases recorded in which rupture occurred as the result of violent trauma to the whole body without there being any external wound; but as a rule it is met with in healthy individuals either as the result of violent vomiting or during a fit of suffocation. Rupture has, however, been found in the course of cerebral and abdominal affections. The site of injury is usually the lower end of the Œsophagus, and it may extend into the cardiac end of the stomach. The tear is as a rule longitudinal, and occurs most frequently posteriorly or laterally, varying in length from one-fifth to two and a half inches. The edges of the wound are clean-cut, and usually no signs of previous disease are to be found. Symptoms vary in different cases, but in the majority the subjects are young or middle-aged and intemperate in matters of food and drink. During an attack of vomiting or suffocation following a heavy meal or an alcoholic debauch, the patient is seized with violent epigastric pain and a sense of internal tearing. Symptoms of collapse rapidly ensue, such as cold sweats, pallor, feeble pulse, and dyspnoea, and in half the cases there is vomiting and even hæmatemesis. The characteristic symptoms supervene later, when subcutaneous emphysema by extension from the cellular tissue of the mediastinum commences to appear, the asphyxial and agonising symptoms increasing, the heart beating feebly, and death ensuing in from seven to thirty hours.

PETREN believes that Rupture of the Œsophagus is brought about by the sudden pushing back of the stomach-contents towards the Œsophagus, partly by the powerful contractions of the abdominal muscles, which injure the organ, and partly by the congestion produced directly by the injury to the upper part of the abdomen. He is not of opinion that any antecedent disease is necessary to produce the rupture, though, of course, this latter would be facilitated if disease were present. In the particular case which drew his attention to the study of rupture of the Œsophagus no such antecedent disease was present. A healthy young man, while working, accidentally received into his mouth air, under a pressure of seven atmospheres, which was emerging from a pipe. The lower end of his Œsophagus was ruptured, mediastinitis set in, followed by left-sided pleurisy, progressive emphysema of the cellular tissues of the mediastinum and neck, and death at the end of 27 hours from asphyxia and cardiac failure.

THE Frequent Failure of the Urine to Decompose in cases of Pulmonary Tuberculosis is the subject of a research by Drs. Hale White and Janmohamed published in the *Quarterly Journal of Medicine*. Eight cases of undoubted pulmonary tuberculosis, in each of which tubercle bacilli were demonstrated in the sputum, were observed; and twenty-nine specimens were collected, each of the whole twenty-four hours' output. On estimating the acidity with decimormal soda it appeared that, in the main, the urine of those with pulmonary tuberculosis is much more highly acid than is that of sufferers from other diseases. Further, among the control patients two exhibited tuberculous peritonitis, and one Addison's disease, in each case without any demonstrable involvement of the lungs; and these three patients passed urine of no abnormal acidity. As all the patients with tuberculosis of the lungs were in-patients and severely ill, it was thought that possibly the failure of the urine to decompose and its high acidity were common to any severe infective disease. But the examination of four cases of pneumonia and one of septicæmia disposed of this: for all these urines decomposed rapidly, and their acidity, though more than normal owing to concentration, was much less than that of the urines of the tuberculous patients, which moreover were of low rather than high specific gravity. No constant relation was found between the degree of acidity and the length of time before decomposition of the urines. It was further established that the urine of two of the patients under observation was sterile; and then its bactericidal power was tested, and proved to be fairly considerable for the bacillus coli communis. Yeasts and moulds, on the other hand, flourish freely in such urine. No proof of the presence of any opsonins towards either the tubercle bacillus or the bacillus coli could be established. It should be mentioned that no drugs were given throughout the investigations.

AN attempt has been made by Dr. A. J. Hall to estimate as exactly as possible the Effects of Certain Drugs in Diabetes Mellitus. For this purpose he treated nine diabetic patients in hospital wards under conditions as nearly as possible identical, and in each case he varied the factors of their treatment—rest, diet, and drugs—but one at a time. He began in each case by allowing ordinary diet, with rest in bed and no drugs. When the body weight, and output of urine and sugar had settled down to fairly regular figures, a change was made to strict diet, and the results carefully tabulated; then some drug was exhibited, and after omitting it a period of time was always allowed to elapse before another was tried. Codeia was given to seven of the patients, beginning with $\frac{1}{4}$ grain three times a day, and increasing gradually up to doses of 4 grains. In some cases there was diminished secretion of urine, in others not; and similar disappointing results upon the output of sugar are recorded. In some cases large doses of codeia actually seemed to increase glycosuria, and in others there was no marked effect either way. No complaint of craving was made when the drug was discontinued. Opium gave

slightly more satisfactory results, and in three cases this was noticeable when codeia had failed: but one patient got worse and died while taking opium. The largest quantity given was 12 grains per day. Secretion was then tried in doses rising to 9 drachms a day: no benefit accrued. The same is true of aspirin, given for twenty-seven days to one patient in doses of 1 drachm per day. After complete rest for a week or two it was observed that some of the patients tolerated carbohydrate diet much better than when allowed up, the quantity both of urine and sugar diminishing; the body weight in these cases fluctuated a good deal.

THE Use of Scopolamine-Morphine Narcosis in Labour, first advocated by Kesniġ, has been extensively tested and reported upon since by many obstetricians. Sir Halliday Croom, in the *Journal of Obstetrics and Gynaecology of the British Empire*, gives his experiences, which are entirely favourable. Beginning with a combination of 1-400th gr. of scopolamine and $\frac{1}{4}$ gr. of morphine, he found the analgesic results not quite satisfactory; and thirst was much complained of as an after-effect. After trying other proportions, he finally adopted $\frac{1}{100}$ and $\frac{1}{4}$ gr. as the best respective quantities, and of this dosage he reports that it markedly diminishes, and in some cases entirely abolishes, the pain of the uterine contractions. The patients sleep soundly between the pains, and in most cases for one or two hours after the completion of labour. Out of 62 cases, some narcosis was evident in the infant when born in 30 per cent., but only in two instances was there any difficulty in reviving the children, not one of whom was lost. Curiously, when complete anæsthesia has not been produced, there is yet very frequently loss of all remembrance afterwards of the labour pains. The drugs are given in the second stage of labour, and in most cases one dose suffices; a second dose, however, was given in about 40 per cent. of the cases without ill effect. Sir Halliday advises that for forceps, version, repair of perineum, and so forth a little chloroform should be given in addition; and he adds that for most multiparæ the latter suffices without scopolamine-morphine, which he especially recommends for primiparæ, and particularly for those of highly nervous temperament.

ORGANIC Iron is often tolerated in much larger quantities than inorganic iron compounds are, and this fact has led to the investigation of large numbers of different vegetables and plants from the point of view of the percentage of iron contained in their dry residue. Tabouriech and Saget have recently carried out extensive analyses upon the subject, and they have discovered that the dried root of the *Rumex obtusifolius*—the broad-leaved dock which must be familiar to most people in the country—contains no less than 0.447 per cent. of iron. This is a percentage which far exceeds any yet found in other plants. The iron is, of course, in organic combination, and the results obtained by exhibiting the powdered root of the *Rumex* by the mouth are excellent.

WRITER'S Cramp is said to be one of the many ailments of a local nature that may yield to Bier's treatment of hyperæmic congestion by the elastic bandage. Three years ago Dr. P. Hartenberg, of Paris, reported a case he had successfully treated in this way. The patient, a man aged 37, had suffered from writer's cramp for 15 years. Every means of treatment had been tried without success, and the condition was regarded as incurable. Without changing the habits or work of the patient, an indiarubber tube was tied around the arm above the biceps, and left in position for 20 minutes night and morning. At the end of a fortnight there was considerable improvement in the condition, and two months later the patient was almost cured. Recently the same treatment has been adopted by Dr. Bucciante, an Italian military surgeon in a similar case that had resisted the usual methods of treatment. An elastic bandage was placed around the middle of the arm for half an hour night and morning. Rapid improvement followed the treatment and at the end of three weeks the condition was said to be completely cured.

DR. BALZER of the Saint Louis Hospital, and Dr. Mouneyrat, Professor of Medicine at Lyons, have presented to the *Société Médicale des Hôpitaux*, an important report upon a new organic compound of arsenic, called Hectine, which appears to have remarkable therapeutic properties in cases of syphilis. It has a complex constitution, and is described chemically as the sodium salt of benzo-sulphone-para-aminophenylarsenic acid. It is characterised by its great solubility in water, and the facility with which it combines with mercurial and iodine compounds. It is said to be much less toxic than atoxyl and its derivatives. Its low degree of toxicity has been verified in animals—mouse, rabbit, and dog, and in man, and it does not produce ocular troubles. Its elimination is very rapid during the first two or three days of administration, and then gradually becomes slower, so that it is advised to administer the drug by injections, or by the mouth every day, or every other day for several days, with intervals of rest of about 10 days. For adults as much as 10 to 20 centigrammes may be given daily. The injections are said to cause little or no pain, and are not followed by inflammatory or other troubles. The authors have used both hectine and hectargyre (the mercurial preparation) in all forms of secondary and tertiary syphilis, and report most enthusiastically of the rapid manner in which the disease yields to the action of these preparations.

SOME interesting observations were carried out by Dr. D. De Sandro, at the Naples Hospital, on the urine of 320 patients admitted for injuries sustained during the Messina earthquake. Among them there were 40 cases of fracture of long bones, nine cases of injury to the spine, three abdominal injuries, and one probable fracture of the base of the skull. The rest consisted of injuries to the soft parts in different regions of the body. The urinary analysis was limited to estimations of uric acid, lactic acid, glucose, and the urinary toxicity. One hundred and twenty-nine cases, or 40 per cent.,

showed a high specific gravity with marked excess of uric acid. This excess continued from admission (third to fifth day after the accident) to the 10th or 15th day, was independent of any uric acid diathesis, and was not accompanied by diminution in volume of urine excreted. It was not associated with any particular injury, but appeared to be closely connected with the extent of the injuries, and their multiplicity, and especially with the time during which the patients were confined among the *débris*. In regard to this last condition the author suggests that the excess of uric acid may be connected with the excessive muscular exertion in the efforts of the patients to disengage themselves from the *débris*, or with the respiratory distress consequent on more or less complete immobilisation of the thorax. Lactic acid was found present in nine cases, or 2.8 per cent. In all these cases there was also excess of uric acid, so that of the 129 cases with uric acid excess 7 per cent. excreted also lactic acid. All these nine cases had remained some time under the *débris*, and three of them sustained considerable cranial injuries. Only six patients showed the presence of glucose in the urine, and they all belonged to the category of 73 cases of head injuries. It was present in the case of probable fracture of the base.

THE *bruit d'airain* produced by the click of one coin upon another is a well-established diagnostic sign of pneumothorax, but the *signe du sou* described by Pitres in 1881 as a clinical sign in cases of pleuritic effusion has been almost entirely ignored. This *signe du sou* forms the subject of an interesting contribution to *Le Progrès Médical* by Professor Henri Verger of Bordeaux, in which the author explains the value of this sign in examinations of the chest. This *signe du sou* is obtained in the same way as the *bruit d'airain*. A coin is placed on the chest and knocked upon with a second coin, while the physician applies the stethoscope at some opposite point. If the sound is transmitted through a continuous homogeneous layer, either solid or liquid, a clear metallic sound is heard. On the other hand, if the sound is transmitted through spongy tissue or through successive layers of different composition, the sound is heavy and muffled. By this sign the author claims that fluid at the base of a lung can frequently be diagnosed, in cases, for instance of cardiac failure, when it is otherwise often impossible to distinguish from pulmonary congestion, except by the exploring needle. He considers this *signe du sou* the most constant and most sure of all the known signs of pleuritic effusion, and by it the variations in the upper limit of the fluid during the course of the disease can be most easily determined. On the other hand, in cases when pulmonary adhesions prevent the usual elevation of the lung with the increase in the effusion, the sign is naturally more equivocal, but even in such cases it may prove more definite than the usually accepted diagnostic signs. In cases of putrid pleurisy, where an early diagnosis is so essential, the routine use of this *signe de sou* at once gives the *bruit d'airain* due to gas in the pleuritic cavity, which may otherwise not be sought for.

HOSPITAL CLINICS.

RECENT EXPERIENCES WITH THE SCHÄFER METHOD OF ARTIFICIAL RESPIRATION.

By CLINTON T. DENT, M.C., F.R.C.S.; Senior Surgeon to St. George's Hospital and Chief Surgeon to the Metropolitan Police.

(Abstract of a lecture delivered at the Polyclinic.)

ABOUT the actual technique of the Schäfer method of artificial respiration I need not say more than a few words. It is founded on the principle of utilising abdominal respiration, and it has some features in common with the method introduced and demonstrated many years ago in this country by Dr. Benjamin Howard, of, I think, New York. But Schäfer's method differs in this, that it depends entirely on the fact that in ordinary tranquil respiration the diaphragm sinks with inspiration, and as it sinks pushes forward the epigastrium. If, therefore, you compress this portion of the belly, you push the viscera back against the diaphragm, drive it upwards, and expel air from the lungs. Schäfer insists on this principle, and has no desire to compress the thorax at all, though practically the thorax is to some extent compressed. He has shown that compression of this part of the abdomen causes a large exchange of air, larger, he thinks, than can be obtained by other methods, including Silvester's. Professor Keith and others, however, doubt this latter conclusion.

I should like to show you first the Howard method. Howard put a large pad under the shoulders, and bent the head right back until it was at right angles to the trunk: in this position the tongue is drawn forwards, and the glottis is necessarily open. Then he got astride of the patient and forcibly compressed the thorax. He grasped the lower ribs, and by so doing to some extent made pressure on the abdominal viscera and pushed them against the diaphragm.

Professor Schäfer also at first advised a pad under the back, but he afterwards abandoned it as not only unnecessary, but positively injurious. He places the patient prone with his face turned to one side, and, kneeling either at the side of him or astride—astride is very much better—he places the palms of the hands on the loins as low down as possible: the thumbs should be parallel on either side of the spine. In giving instruction to the police we insist that the palms of the hands should not touch, but be placed just above the iliac crests: the fingers just reach the lowest ribs. All that need be done by the operator is to press and relax alternately by leaning forward on to the outstretched arms, waiting a couple of seconds, and then without removing the hands throwing the body back on to his haunches. This pressure causes the expiration that would normally be produced by the natural resilience of the abdominal wall. It must be noted that in an apparently drowned person (or one actually dead) the abdominal wall is much less elastic and resilient than in normal individuals. When the weight of the body is thus thrown on to the arms, a pressure of forty, fifty, or sixty pounds is exerted, which is quite enough: this is much less likely to do any harm than is the Howard method.

Such briefly is the Schäfer method in its perfected form. Repeated experiments have been made on the living human subject as well as upon dogs and other animals. The first public body to take up this new method (or, if you please, this new modification of an existing method) was the Life Saving Society, and great credit is due to them for it. They adopted it in 1905. Some time later, dissatisfied with the methods of Silvester and Marshall Hall, I was anxious to see whether this simpler method might do for the Metropolitan Police. Since anybody holding any office in a Public Department is, practically speaking, a target to be shot at, I thought it wise, before introducing it, to take other opinions, and the Royal Society of Medicine, at my request, went into the matter. They recommended it for the apparently drowned, and it has now been officially adopted for the Metropolitan Police. Although it has been in use only for a few months, and no one can as yet form an opinion of its full value, enough has already been seen to show that the change is undoubtedly a judicious one.

Every new method introduced upon the medical stage seems to pass through certain definite vicissitudes. At the outset full of promise, it embarks on a career of great success until critics or the introducers of new measures fall upon it. If it survives these onslaughts, the originator is often the next to fall foul of his own protégé. He will point out how he has improved on the original by his later modifications. This has been especially the case in the treatment of the apparently drowned. A fair criticism of the Schäfer method is that the original experiments were made upon living individuals, and even on those who were prepared by a series of deep inspirations; not upon the apparently drowned. The difference is extremely great: but as a matter of fact Schäfer had previously experimented on dogs which had been immersed for varying periods.

My chief object this afternoon is to put before you the experience of cases actually treated, and to show how far this experience proves the method to be good practically. It is, I think, certainly the simplest and least fatiguing method yet devised, and certainly the best when there is only one person to carry out the resuscitation.

There have been many cases of apparent drowning under treatment, for a fair proportion of the cases with which the police have to do are of attempted suicide by jumping off bridges. It is curious how a particular bridge becomes fashionable for this purpose for a time: at one time Waterloo Bridge was almost constantly selected, though it is much easier to jump off Westminster Bridge. Sometimes the intending suicide selects the Embankment, and there is another curious point in connection with this. Between Westminster and Waterloo Bridges such cases were very

common, and are now extremely rare. I asked one of the police, who has been on Waterloo Pier for twenty years, if he could explain this. He said in the old days there was no traffic on the Embankment, which was almost deserted at night: but since the introduction of tramcars and the electric light suicides have become very rare. People still go down to the Embankment with the intention of committing suicide, but they do not carry it out. With regard to those who jump from the bridges, many are not drowned; but are fatally injured by striking against the buttresses as they fall.

The first case treated by the Schäfer method was that of a man found floating face downwards in the Regent's Park Canal: he was still warm when removed, though it was quite uncertain how long he had been immersed. The Schäfer method was employed for 30 minutes, but without success. I never heard of any other system of artificial respiration yet which started with a failure as this did. At the post-mortem the lungs were distended to their fullest extent: air and water exuded from them on pressure. It is, therefore, certain that air had got well into the lungs. As usual, all the abdominal vessels were engorged with blood, and this raises an important question. Whether you should in these cases be too instant in attempting to empty the veins of the portal system is somewhat a moot point. If you do, you are overfilling what is already full. In the Schäfer method you undoubtedly stimulate the heart's action.

In Professor Schäfer's instructions, as printed for the use of the police, it is laid down that no time is to be wasted in removing clothing: but I think myself that certainly some loosening of the clothing is desirable. In the case I have mentioned the medical man who was summoned and watched the artificial respiration being performed noted that the patient's thick clothing seemed to him to hamper the effective application of the pressure. It is to be remembered that viscera, such as the liver, which are engorged with blood are friable and may be ruptured by excessive force. Belts, and those mysterious garments called corsets, may interfere materially with the descent of the diaphragm, and it seems quite clear to me that if any assistant is at hand he should devote himself to loosening the garments.

The next case was that of a man of over sixty, who was immersed for about five minutes, perhaps rather more, perhaps rather less, in bitterly cold weather. This again was a failure. I mention it because it occurred, and because the Schäfer method was employed actually in the boat by which he was rescued: this is a great advantage of the new method, which can easily be performed in quite a small boat. Other cases of apparent drowning have been successfully revived.

It has been suggested to me by one or two of the divisional surgeons that the method is more adapted for thin persons and for men rather than for women, but with this I do not agree. If the method is used properly the result will be as good in the stout as in the emaciated, and in women as in men. Mr. Henry, the Secretary of the Life Saving Society, has remarked that if a stout and an emaciated person are immersed for the same length of time, the

former has much less chance of recovery than the latter. Another suggestion is—and Silvester himself made much of it only a year or so before his death—that the astride position is improper. Even if it were, that surely does not matter much when it is a case of life or death. I fail myself to see anything improper at all about it. Still, the point has been raised, and it is worth noting that one can do the movements and exert the pressure just as effectively, though less easily, without getting astride of the patient.

Another case I should like to mention occurred at Southampton. For ten minutes the Silvester method was used without success: then came a police sergeant, who succeeded with the Schäfer method. I do not claim this as any proof of the superiority of the latter, for Silvester's method cannot be said to have failed. But the police themselves think the new method is superior.

It is also interesting to consider cases where drowning is not in question. There is the case of a man who was overpowered by heat. The Schäfer method was employed for a few minutes with success, but it was used with a big pad under the thorax: it was therefore not really the Schäfer method at all, but Howard's method reversed. The medical man who did it thought highly of the result. Another case was one of coal-gas poisoning, but since the two bodies were cold and rigor mortis present no recovery was possible, and it is not surprising to hear that the Schäfer method failed after an hour and a half. It was, however, noted that the expiratory movements produced were enough to blow out a lighted match. The method is certainly also applicable to, and has been successfully employed in, strangulation by hanging. Another curious case is that of a boy who was struck a very severe blow on the side of the neck by the shaft of a cart. Respiration ceased, and it was at first thought that he had broken his neck. However, he recovered under a combination of the Schäfer method and oxygen, and was probably suffering from the effects of the blow upon the pneumogastric and other main nerves of the neck.

One more case: a woman attempted to drown two small children in a bath. The Silvester method was used by the medical man called in, because he thought the Schäfer method should not be employed for children. But it happened a few days ago that a constable was attracted to a burning house from which a man and woman had escaped, leaving some children inside. Taking a series of deep breaths, and keeping a wet cloth over his mouth and nose the constable bravely entered the burning house and rescued a small child. A passer-by followed his example and rescued another. Both children were deeply asphyxiated, and the Schäfer method was pursued for 30 and 40 minutes respectively before breathing recommenced. That case shows conclusively, to my mind, that the method may be used safely and advantageously in the case of children.

These are only scattered notes from our present records, but I think they show that the method is applicable to every sort of case, and that Professor Schäfer's claims for it are not only well-founded but stand the practical test of experience.

SPECIAL ARTICLES.

ACUTE POLIOMYELITIS IN NEW YORK.

Of all the infantile disorders whose diagnosis and origin baffle not infrequently even the most expert, acute anterior poliomyelitis is one of the most mysterious.

One of the most characteristic and unaccounted-for features of this condition is its occasional outbreak into epidemic form; though, granted an infective causal organism, perhaps it should really excite more surprise that the disease is usually so very sporadic. At all events, the epidemic which last year visited the United States, particularly New York, throws into the shade the records of previous similar epidemics in Stockholm and elsewhere, for over 1,200 cases were reported to the New York City and State Boards of Health, and Dr. Holt says the total is not far from 3,000. The lessons of this extensive visitation are considered in the *Archives of Pediatrics* by Dr. Henry Koplik and Dr. L. E. La Fetra respectively, from whose articles most of the facts herein set down are derived.

The cases were distributed throughout the city, regardless of the sanitary state of the various districts or the social position of the inhabitants. Water and milk supplies and hygiene in general are believed to have been better than in any previous year, and fashionable suburbs suffered equally with crowded slums and better-class urban districts. The epidemic affected children of all ages from infancy to adolescence, and a few scattered cases occurred among adults. The disease is described as conforming to three fairly distinct types, two of which differed very materially from the usual text-book account of acute anterior poliomyelitis. At the onset the symptoms often resembled somewhat those of meningitis, yet not sufficiently so to deceive acute and painstaking diagnosticians. Vomiting was quite common, and occasionally persisted for days, but as a rule occurred only at the onset.

Convulsions were the exception, though fever was practically the rule; the temperature ranged from 100° to 102° F. in mild cases, and up to 105° in severe ones. Cough, tonsillitis, and sore throat were rather rare; rigidity of the neck a good deal less so. Irritability and restlessness were very common, and general hyperæsthesia was occasionally recorded. Headache, sometimes of an excruciating kind, was often noted, and pain or tenderness in the affected limbs was very usual indeed. Both writers emphasise this last point, as the distribution along the course of peripheral nerves caused much confusion with neuritis; the resemblance to early meningitis is also sufficiently obvious from this brief list of premonitory symptoms.

Dr. Koplik's three types are described as cerebral, neuritic, and the ordinary sporadic form in which paralysis is almost the first sign of the disorder. In the cerebral cases a child in apparent health would either go suddenly into a condition of unconsciousness, or would awake complaining of headache and vomiting, and then either become comatose or develop paralysis of all four limbs without losing consciousness; the temperature also

rose, more or less. In bad cases symptoms referable to the bulb supervened, and paralysis of the respiratory muscles and of those of deglutination would soon be followed by death from bulbar paralysis. In other cases these cerebral symptoms would abate, though the paralysis of the extremities persisted, accompanied sometimes by paralysis of the thoracic and abdominal muscles. Rigidity of the neck and even head retraction were occasionally noticed.

In the neuritic type acute pains in the extremities, often referred to the joints, first attracted attention. Gradually paralysis of one or more limbs developed, with the onset as a rule of febrile disturbance also; but this initial pyrexia was soon succeeded by normal readings. Rheumatism was simulated in many cases, and neuritis in others. The pains sometimes lasted as long as three or four weeks, and complete, or almost complete, recovery from the paralysis seems to have been comparatively common in these neuritic cases. The third and more classical type scarcely needs detailed description: a slight stomacheic or intestinal disturbance, and febricula, followed by paralysis of one or two extremities, or of a group of muscles of one limb only, was the usual clinical picture.

With regard to the causation of this acute and curious disease, many observers resorted to lumbar puncture; but one and all failed to discover either in films or cultures any organism, though a polynuclear leucocytosis was occasionally found. The cerebro-spinal fluid was uniformly clear, and as a general rule was not exuded under any abnormal pressure. A moderate leucocytosis in the blood is described by La Fetra. The conceptions of the pathology which have been originated in Scandinavia by Harbitz, Scheele, Medin, and Wickham during recent years seem to commend themselves strongly to American physicians. The process is regarded as an acute disease of the whole central nervous system, characterised especially by minute hæmorrhages. These may occur not only in the anterior columns and horns of the cord, but in the posterior; not only in the spinal cord, but in the pons, medulla, or cortex. According to their principal distribution will result a cortical or pontine encephalitis, a spinal poliomyelitis, and so on. The neuritic cases are explained as due to irritation of the peripheral nerves resulting from inflammation of the *pia mater* of the cord and brain, which is believed always to precede that of the grey matter of the cord or cortex. Dr. Flexner concludes from the negative bacteriological findings of the cerebro-spinal fluid examinations that a toxic degeneration due to toxins produced elsewhere in the body is a more plausible suggestion than an acute microbic infection of the cord itself.

It is particularly evident that the New York physicians, equally with those in Norway and Sweden who have had the opportunity of studying epidemics, are no longer inclined to regard the disease as one essentially affecting the anterior horn cells. The deep reflexes were very often noted to be not

entirely lost, as they necessarily are in a destructive lesion of those cells, such as occurs in the ordinary form of acute anterior poliomyelitis. It follows logically enough that this last name is somewhat a misnomer, inasmuch as many other parts of the central nervous system may be affected by the disease process. In the neuritic cases the knee-reflexes were nearly always increased, and even in some of the cases resembling the classical text-book descriptions they were present, or not entirely lost. In the cerebral cases the reflexes were as a rule obtained, but there was no Kernig sign nor a Babinsky reflex elicited: so reports Koplik, but La Fetra found the latter sign three times in twenty babies, and never saw an exaggerated tendon reflex throughout the epidemic.

HOW POISONS WERE TRIED ON MAN.

FROM a very early period science has been gradually built up by experimental methods, and even the ancients were cognisant of the fact that the remedial properties of substances could only be proved by actual experiment. Not only animals but human beings were utilised for this purpose by many famous physicians in the Middle Ages. Criminals who had been condemned to death were generally selected for these experiments.

Vivisection of the live human subject was practised by the Alexandrian school in the times of the Ptolemies. Erasistratus and Herophilus, pupils of Chrysippus of Cnidus, experimented upon six hundred condemned criminals handed over to them by Ptolemy Soter. They opened the abdomens of these unfortunates to study the movements of the colon and those of the muscle of the diaphragm on the inspiration of air; they also opened the chests of some to study the cardiac movements. Their conduct, however, met with the reprobation of their contemporaries. Celsus and Galen reproached Herophilus with "cruel and useless sacrifices" of human feeling, while Tertullian called him roundly "an executioner who gave lingering death with refined cruelty." The court physicians of Attalus (King of Pergamus) and Mithridates (King of Pontus) were authorised in virtue of their office to try poisons upon criminals, and were accused by their jealous colleagues of pluming themselves upon their privileges, while less favoured practitioners were compelled to content themselves with cocks and dogs to experiment upon.

One of the earliest records of the use of animals for the purpose of physiological experiment is to be found in a document, still preserved in the Venetian secret archives, which bears the date 1432. It states: "Trial has been made on three porcine animals of certain venoms found in the chancery sent very long ago from Vicenza, which have been proved not to be good."

Brassavola of Ferrara studied little-known and doubtful remedies by testing their effects on criminals, and Fallopius, his pupil, who eventually made such important physiological discoveries, followed his master's example. It is recorded that Cosmo de' Medici, Grand Duke of Tuscany, on one occasion ordered the magistrates of Pisa to hand over two men to Fallopius, "in order that he may put

Dr. Jacobi remarks that where polioencephalitis predominates the patellar reflex should remain intact: when poliomyelitis is the main lesion, the reflex rapidly disappears and atrophy will soon set in. He regards the prognosis of the former as much better than that of the latter. Spastic paralyses were seen in a few cases, though the great majority were of the usual flaccid character. It was also especially noticed that in those patients in whom the paralysis was to remain permanent the atrophy of muscle, and the onset of degeneration and of contractures were extraordinarily rapid. Instances of paralysis affecting the face alone were by no means rare, and several of them were at first diagnosed as tuberculous meningitis.

them to death in whatever way he pleases, and then anatomise them." Fallopius, however, seeing the men were condemned to death, seems to have acted with both dignity and humanity. He gave them each eight grains of opium; one died and the other recovered. Cosmo pardoned the latter unfortunate, but, if we may believe contemporary records, Fallopius did not: he gave the man eight grains more, and this time he died.

At Bologna, poisons were secretly administered to criminals to obviate the perturbing influence of fear upon natural toxic effects. Arsenic was employed in the same way at Mantua and Florence. Ambroise Paré, the eminent French surgeon, was invited by Charles IX. to try the alleged antitoxic action of the calculi found in the intestines of oxen, and known as bezoar, upon a man condemned to be hanged. What the poison was which was administered in this case is not stated, but the victim suffered so cruelly that he declared he would have preferred death upon the gallows a hundred times over. Even in the eighteenth century François Ranchin, Professor and Chancellor of the Faculty of Montpellier, wrote that experiments upon human beings were worthy of approval and had been held in high honour by the ancients.

English surgeons in days gone by were willing to avail themselves when the opportunity afforded to experiment on a condemned criminal. In 1731 a man named Charles Ray was reprieved on condition that William Cheselden, the famous anatomist and surgeon, should perforate the drum of his ear in order to ascertain if it would cause deafness. The unfortunate subject, however, was taken ill with fever before the experiment could be performed, and the operation was abandoned. Again, in 1763, another condemned man was offered a reprieve on condition that he consented to have one of his legs amputated to test the power of a new styptic. Fortunately, perhaps, for him, he died before the experiment could be performed. Four years later one John Benham is reported to have been reprieved for a similar purpose, but when Pierce, the inventor of the styptic, waited upon the Secretary of State to make arrangements, he was informed that his Majesty the King was of the opinion that it was quite improper to try such an experiment.

MEDICINE.

ASCITES—VIII.

THE DIFFERENTIAL DIAGNOSIS OF THE CAUSE OF ASCITES (*Continued*).

Cirrhosis of the Liver.—If ascites is due to this cause there is likely to be a history of former chronic alcoholism, even though the patient may have been latterly teetotal. One would expect to find symptoms and signs of alcoholic habits, such as nausea or sickness in the morning, loss of appetite for breakfast, a desire for a mid-morning dram, a history of epistaxis, hæmatemesis, or melæna, acne rosacea, or dilated stellate venules on the face and around the costal margin. It may be possible to feel the liver edge firm and roughened; the spleen may also be enlarged, although in adults suffering from hepatic cirrhosis it rarely extends as far down as the level of the umbilicus. There is a variety of cirrhosis in young persons, on the other hand, designated "splenomegalic" on account of the striking enlargement of the spleen that occurs in it. Urobilin and bile salts may be detected in the urine, even when jaundice is absent.

As a rule the occurrence of ascites in cirrhosis is a late sign, and the patient seldom lives many months after it has become necessary to tap the abdomen for it. Hale White lays much stress upon this as an aid to diagnosis—an ascites may be diagnosed as due to cirrhosis of the liver, but if the patient survives to have four or five tapplings, or more, the original diagnosis is likely to be wrong, and it should nearly always be revised to perihepatitis.

Perihepatitis.—Ascites may be the only indication of perihepatitis, and unless the liver can be palpated the diagnosis is most uncertain. An ascites that was originally due to some other cause may, as the result of repeated tapplings, become continued by the supervention of perihepatitis, even though the original cause of ascites becomes cured. Besides these cases, however, there are others in which perihepatitis antedates the first tapping. The condition is, in a sense, only a variety of chronic simple peritonitis.

The capsule of the liver becomes opaque, white, and very much thickened; it contracts and distorts the shape of the organ, especially its edge, which becomes either very blunt, or else curled up, under the main mass of the viscus. The surface is frequently covered with numbers of pits, which give it an appearance that has been compared to that of skin that is scarred as the result of smallpox.

If the turned-up, or folded under, condition of the edge of the liver can be determined by palpation, it is pathognomonic of perihepatitis. Albuminuria occurs in the majority of the cases of this disease. Hale White found on analysing twenty-two cases of universal perihepatitis that the kidneys were pathologically granular in nineteen.

It is often very difficult to distinguish between cirrhosis of the liver with ascites and perihepatitis. Jaundice very rarely occurs in the latter, whereas it is not uncommon in cirrhosis. If albuminuria is present it is in favour of a diagnosis of perihepatitis, for although alcoholism is a responsible cause both of

cirrhosis of the liver and of granular kidney, it is decidedly rare to find the two lesions well marked in one and the same case.

Syphilis.—Ascites is not often caused by syphilis. There are three ways, however, in which it may possibly be so caused: As the result of intercellular cirrhosis of the liver due to congenital syphilis, as perihepatitis, and by a gumma, or the scar of a healed gumma, stenosing the portal vein.

In cases of ascites with enlargement of the liver, the possibility of syphilis being at the root of the mischief should not be forgotten, on account of its important bearing on the treatment of the case. A history of a primary lesion, followed by a sore throat, or a rash, may be inquired for, and later signs, such as nodes or ulcers, may be looked for.

The liver in this condition may be greatly enlarged, and sometimes it can be felt to contain large and irregular masses, which may easily be mistaken for malignant disease or even for abscesses. The lumps in such a case are gummatous; the healing of a gumma does not restore the surface of the liver to its original smooth condition, for where each gumma has been there will be a permanent, deeply-depressed scar, which may easily be mistaken for an umbilicated mass of secondary growth.

Carcinoma of the Liver.—Ascites due to carcinoma of the liver is usually associated with marked and rapid emaciation, cachexia, and often intense and persistent jaundice. In a typical case the liver is considerably enlarged, and if there is not a very great amount of fluid in the peritoneal cavity, it may be felt extending to the level of the umbilicus, or even below it.

The edge may be determined to be hard, thickened, irregular, and coarsely nodular, the surface to be hard, tender, and very irregular from large projecting nodules of growth, the central part of which may be umbilicated. In some cases in which the presence of decided nodules cannot be determined, it may be difficult to distinguish between cirrhosis and carcinoma. A careful investigation should always be made for signs or symptoms of a primary growth, especially of the stomach, rectum, gall-bladder, and pancreas. Rectal examination should on no account be omitted. It is not common for cirrhosis of the liver to cause intense jaundice simultaneously with ascites, so that if the jaundice is well marked it favours the diagnosis of carcinoma. Wasting and weakness occur with cirrhosis as well as with carcinoma, so that too much stress must not be laid on these symptoms in the differential diagnosis. Moderate intermitting pyrexia may also be associated with both diseases.

In cases of primary diffuse carcinoma of the liver, a correct diagnosis may be impossible, and even at a post-mortem examination it may be difficult to express a definite opinion until a histological examination has been made.

(*To be continued.*)

THE VARIETIES OF NEURASTHENIA.

THE term neurasthenia was originally introduced by Beard to denote that which was at first regarded as a distinct disease entity, but is now known to be merely a convenient means of designating a symptom group, which may be observed under more than one series of conditions. It is a term, moreover, that is arbitrarily restricted in its meaning, for by no means every state in which there is deficiency of nerve power or of nervous force can be styled neurasthenic. There is an immense reduction in the nervous power of individuals who are obviously suffering from typhoid fever, for example, or from cancer of the stomach; but it would detract greatly from the clinical value of the term neurasthenia if it were applied to such cases as these. Similarly, even in cases of chronic ill-health, in which there are no very definite symptoms or signs, it is wise to avoid any hasty diagnosis of neurasthenia; for the latter term should be reserved for condition of deficient nervous energy for which no definite post-mortem changes would be found. In a young person gradual loss of energy and strength is much more likely to point to commencing phthisis than to neurasthenia alone, and in an individual of maturer years such lesions as arteriosclerosis, granular kidney, or an early stage of cancer of the stomach must be excluded before a diagnosis of neurasthenia is made.

Even so, however, there remain undoubted cases to which the term in its restricted sense is applicable. The syndrome is familiar enough, the peculiar feelings in the head, or elsewhere, the headaches, the dyspepsia, the insomnia, the ready fatigue, both of body and of mind, the impairment of memory, the difficulty in maintaining concentrated attention, the mental indecision, the occasional panics. Without entering into a discussion of the different types that have been described, according to the part of the nervous system most affected—the cerebral, the spinal, the cerebrospinal, the sympathetic or visceral types—there can be no doubt that the same symptom groups can be produced by different causes; and if the treatment is to be successful it is necessary to adopt very different measures in different cases. Classified according to causation, one may distinguish at least the following types of neurasthenia:—

(1). A neurasthenia due to the excessive expenditure of nerve force over considerable periods of time. This is seen particularly in two classes of patients. First, those who come of "nervous" families, and who have, therefore, inherited nervous systems which can sustain comparatively slight nervous expenditure; and, secondly, those who, having inherited a particularly strong nervous system, have used it to the very utmost in business, or otherwise, until the expenditure of nervous force has exceeded the nervous income, and there is a nervous bankruptcy—neurasthenia. The latter class of case occurs mainly amongst those whose interests have been centred upon a comparatively small number of objects—money-making as an aim for example, especially in the person who has no hobby outside his work. It is good for the nervous system to have variety. All work and no play makes Jack a dull boy; it produces neurasthenia.

(2). A neurasthenia due to injury. The railway spine is a familiar example of a condition which lies on the borderland between true neurasthenia in its restricted sense, and an organic lesion resulting from multiple small spinal hæmorrhages. It will always be a matter of the greatest difficulty to assess, in a given case, the precise degree to which some of the symptoms that result from injuries to the head or back are due to gross changes in the central nervous system, on the one hand, or to neurasthenia proper on the other.

(3). A neurasthenia that results from the chronic mis-use of such things as tobacco, alcohol, or tea. It is not always easy to decide whether it is the substance mis-used, or the circumstances under which it is mis-used, that is most responsible for the symptoms, but that it is the substance rather than the circumstances in many instances is exemplified by the greater ill-effects that follow the use of some kinds of cigarettes than others.

(4). A neurasthenia that results from too monotonous and sedentary an indoor mode of living, seen especially in women in towns. The nerve exhaustion results in these cases less from too great an expenditure than from too little cultivation of the nervous tree. Nervous exhaustion also plays a part, arising from worries and anxieties in connection with the illnesses of children, money matters, and so on.

(5). A neurasthenia which is the first stage of melancholia, or of some other mental disease, such as general paralysis of the insane.

(6). A neurasthenia due to auto-intoxication from the intestines. It is the latter variety of neurasthenia that receives not a little benefit from lactic acid bacterial treatment, though Mr. Arbuthnot Lane, it seems, would advocate colectomy as the proper cure.

TWO HOMELY REMEDIES.

HEDGE MUSTARD FOR LARYNGITIS.—The common hedge mustard, *Sisymbrium officinale*, was official in the codex of 1884 under the name of Erysimum, but it has since been discarded. Saintignow has recently revived some interest in it, and it is stated that the plant is of real value in the treatment of inflammatory affections of the pharyngeal or laryngeal mucous membranes. An infusion of the leaves taken as such, or as syrup, will rapidly cure an acute attack of laryngitis often in four and twenty hours. It is specially valuable in simple laryngitis, whether acute or chronic.

MUCILAGE OF LEEKS for similar conditions is a remedy that was recorded by Aristotle, but it has been forgotten except by a few. The mucilage is prepared by boiling leeks until the acrid volatile oil has been expelled, and then evaporating the expressed decoction to the consistence of a mucilage. The latter has an emollient action which is exceedingly grateful in cases of smoker's throat and pharyngitis, whether acute or chronic. It is also valuable in conditions of catarrh in the bigger bronchial tubes.

SURGERY.

THE PATHOLOGY OF ACUTE INFLAMMATION IN BONE.

THE phenomena associated with the acute inflammation in bone are essentially the same as those of acute inflammation in other parts of the body: they are only modified by the anatomical structure of bone and the particular manner in which it reacts to injury or infection.

CLASSIFICATION OF ACUTE BONE DISEASES.

We can divide acute bone disease into three classes —(a) traumatic, (b) infective, and (c) septic. By infective we mean that one of the pyogenic micro-organisms is responsible for the changes seen, but that it is brought to the affected region by the patient's blood stream. It is really an auto-infection, and for this reason the term auto-infective would be more exact. A septic inflammatory process, on the other hand, implies that the organisms have been introduced from without, as when osteomyelitis supervenes on an amputation, as the result of sepsis occurring at the time of operation.

It will thus be seen that the three classes are not divided by any hard and fast line, since an area of inflammation which is originally due to an injury may become invaded by septic organisms from the blood stream (infective) or from without (septic) if the original injury has happened to cause a wound in the superficial tissues covering the bone. As a matter of fact, a great number of the so-called infective inflammations are preceded by an injury which may be so slight as to pass almost unnoticed at the time. Acute epiphysitis occurring in infants is a typical example of this; and it is, therefore, not easy to put this affection in any one class.

If we regard the phenomena of inflammation as being divisible into the stage of reaction (vascular changes) and the stage of repair (connective-tissue cell changes), it will be found that the factors which are peculiar to bone inflammation belong to the latter class. The vascular changes consist, as in inflammation elsewhere, of a vaso-dilatation of the blood-vessels of the part with oscillation, slowing, and finally stasis of the blood stream, which is separated into a central layer of red blood corpuscles and a peripheral one of leucocytes. The whole object of this stage is to facilitate the outpouring of an exudate, whose function is to prepare the way for the processes of repair.

RESULTS OF ACUTE INFLAMMATION.

Acute inflammation in bone generally causes necrosis; this is due to interference with its blood supply. A long bone is supplied with blood from two sources, which are derived respectively from the nutrient artery and the periosteum. The former supplies the bone on its medullary aspect, while the latter consists of a number of small branches which enter the bone at right angles and nourish it superficially.

As the result of an injury to the surface of the bone, as, for instance, in the case of a blow on the subcutaneous portion of the tibia, a serous subperiosteal

exudate is poured out and the periosteum is stripped up from the bone over the affected area. A flat area of bone is thus deprived of its blood supply, and undergoes necrosis. The dead bone so formed is known as a sequestrum; and in periostitis pure and simple it is flat and laminar in shape. The death of the bone may be prevented by early incision, or, on the other hand, infection may occur and the serous effusion then becomes a purulent one. The periosteum becomes thickened and inflamed, and the pus gradually makes its way to the surface, and a perforation is formed in the thickened periosteum which is known as a cloaca.

The dead bone underneath acts as a chronic irritant, and granulation tissue is deposited between the dead bone and the living, so that the sequestrum becomes separate and lies loose. Later, calcareous salts are deposited in the inflamed and hyperæmic periosteum, so that a new layer of false bone is formed. The ultimate fate of the sequestrum varies according to circumstances. It may be removed entire by surgical interference, or it may be broken up into a number of small pieces by the granulations and discharged piecemeal through the cloaca.

Whichever of these methods is employed, one thing is certain, and that is that healing will not take place until the entire sequestrum comes away or is removed.

OSTEO-MYELITIS.

So far mention has only been made of periostitis, but the features of the process are essentially the same, whatever part of the bone is attacked. Osteomyelitis is nearly always auto-infective. The process starts generally in the delicate growing end of the diaphysis of a long bone where the medullary and periosteal blood supplies inosculate; either in a bone whose resistance has been diminished by a slight injury, or in an individual, generally a child, who is debilitated as the result of recent acute zymotic disease, such as measles or scarlet fever.

The infection causes thrombosis of the central vessels of the bone—i.e. the branches of the nutrient artery, and the sequestrum in this case, instead of being laminar, is tubular, involving the entire shaft. An abscess is formed in the medullary cavity. This most often burrows outwards along the epiphyseal line and becomes subperiosteal also; but in young children it may make its way straight through the epiphysis into the joint.

Since the periosteum is tightly bound down to the shaft of the bone at the epiphyseal line it follows that infection of the articulation from a subperiosteal abscess can only occur if the epiphyseal line lies inside the joint capsule. This is the case in the upper end of the ulna and the head of the femur. In other respects the pathology is the same as in periostitis. An involucrum forms all round the tubular sequestrum, and one or more cloacæ form, through which the sequestrum is gradually discharged in small portions.

DISEASES OF CHILDREN.

THE TREATMENT OF ENURESIS.—II.

In the previous article on this subject it was stated that the urine is sometimes hyperacid. These cases are generally those of strong, full-blooded, well-fed children, over five years of age, and of the acquired variety. More commonly the urine is alkaline or neutral, of low specific gravity, excessive in quantity, and containing triple phosphates or oxalates, a few pus cells, and a trace of albumin (Lewis). On these grounds certain dietetic measures are recommended. When the urine is highly acid give plenty of water, citrate of potash, and farinaceous food, cutting down the meat supply. As an instance of the uncertainty of treatment, it may be mentioned that Still recommends that the carbohydrates should be cut down, if there is excess of uric acid. If the urine is alkaline it is generally advisable to reduce the amount of carbohydrate food and increase the nitrogenous elements in the diet. It may be taken that the dietetic treatment consists in giving a diet which conforms to the physiological needs of the child and its digestive capacity, paying attention to individual peculiarities. Alcohol, tea, coffee, beef tea, highly seasoned, irritant, and diuretic foods should be omitted. An excess of sugar and sweets is certainly injurious, probably by setting up carbohydrate dyspepsia or intestinal irritation, and upsetting the balance of economy in the supply of other foods by impairing the appetite. Indigestible foods, such as new or imperfectly cooked potatoes, and raw fruits, should be condemned. An ordinary mixed diet is the great desideratum, with attention to digestion and constipation, the promotion of elimination, and measures directed to improving the general health. It is often advantageous to teach the child to defæcate before going to bed, rather than at the usual hour in the morning.

Cold bathing and douching are of value as stimulants of the nervous system and through the psychical effect. Prendergast tried cold douching on 80 boys in an orphan asylum and cured 75, no other treatment being used. A nervous lad was cured by one shock. The treatment is only suitable after the fourth year of age. Strip the child and stand him in a tub or bath. Fill a watering-can or large jug with cold water and pour it over the shoulders and down the back, dry quickly with a coarse towel. Douche every night at bedtime. The ordinary cold bath should be given in the morning to tone up and invigorate the muscular and nervous systems, if the child is strong enough.

Among general measures may be mentioned limitation of the amount of fluid during the latter half of the day, none being allowed after 4 P.M., unless the urine is highly concentrated; a well ventilated bedroom; bedclothes light and not too warm; the lower end of the bed raised; a cotton reel fixed with a tape so that it rests on the spine and prevents the child sleeping on the back; and waking the child to pass water an hour to an hour and a half after going to sleep.

Numerous drugs have been recommended, and their value is most difficult to estimate. On the whole belladonna and atropine have stood the test of

time best. It is essential to diagnose as accurately as possible the causation. If there is increased irritability of the lumbar centres, bromides may prove beneficial. Strychnia and its preparations are indicated, if there is lowered cerebral control or atony of the musculature of the bladder. Whether belladonna or atropine is used, it must be pushed up to the limit of tolerance, or failure results, and it must be remembered that children are almost always, but not invariably, extremely tolerant of this drug. It induces flushing of the face, dryness of the tongue and fauces, dilatation of the pupils, and dimness of vision, occasionally an erythematous rash, and even delirium. The last two symptoms show that the dose must be reduced. Give the medicine after tea and before going to bed, in two doses. Begin with five minims, and increase each dose by the addition of two and a half minims every fifth day until 20 minims are given. Keep up the maximum dose for two weeks, and reduce it in the same way as it was increased. Tincture of lycopodium may be added in equal doses, or the belladonna may be combined with nux vomica or bromide. Belladonna is said to contain hyoscyamine and to be safer than atropine. The latter drug is often preferred because of the greater accuracy in dosage. One grain of the sulphate in an ounce of water forms a mixture of which one minim may be regarded as equivalent to one five-hundredth of a grain of alkaloid. Two doses are given at 4 and 7 P.M., and one of the doses is increased every day until the child takes at each dose an amount equal to one minim for each year of its age. It is reduced after the enuresis has ceased for two weeks. Donald Macalister some years ago recommended a mixture of liq. atropin. sulphat. m90, liq. strychnin. hydrochlor. m45, syr. aurantii ad unciam unam. Five drops are given at 9 P.M., and the dose is increased by five drops every fourth night until it reaches thirty drops, after which it is reduced by ten drops every fourth night. The dose may even be increased to sixty drops. One minim of the liquor atropinæ is equivalent to twenty of the tincture of belladonna, so these large doses should be used with great caution. The tincture may be ordered in doses to half a drachm nightly, and even to a drachm three times a day, especially if combined with citrate of potash and cold douching. The course of treatment lasts for three months, the maximum dose being given for one month and reduced gradually. Antipyrin in large doses, at 7 and 9 P.M. for a week, and repeated after a week's interval, is occasionally curative. The tincture and fluid extract of *rhus aromaticus*, m10-30, are also useful for vesical atony, but not nearly so much so as the arseniate of strychnia. Salol or urotropin is given for bacteriuria and cystitis. Alkalies and nux vomica, ergot and nux vomica, the oxide or valerianate of zinc, and the triple valerianates have also proved beneficial. Finally the habit may be broken in hopeless cases by a course of Weir-Mitchell treatment; by dilatation of the bladder under anæsthesia; by the passage of full-size metallic bougies; or by electrical applications.

LARYNGOLOGY AND RHINOLOGY.

THE THROAT AND NOSE IN THE ÆTIOLOGY OF TUBERCULOSIS.

A GLANCE at the excellent series of articles collected and edited by Dr. T. N. Kelynack* will serve to show that a large amount of consideration is being devoted under its different aspects to the part played by the nose and fauces in allowing the entrance of the bacillus tuberculosis into the body. It was at one time pretty generally accepted as an axiom that pulmonary phthisis is the result of the direct inhalation into the lungs of tubercle bacilli floating in the air. But experiments on the inhalation of dust showed that this simple explanation cannot be accepted in its entirety. Many series of inhalation and feeding experiments have been performed, and it has been proved that tubercle bacilli can enter the body through the mucous membrane of the fauces and alimentary canal without producing any lesion at the site of entry; the theory is now widely held that the infection of tuberculosis generally obtains admission in this way and passes into the lymphatic system, and there is no doubt that the lungs can be infected by this route, though it is not yet proved in what proportion of cases pulmonary phthisis is actually produced by infection through the lymphatics. It appears to be a fact that in childhood the lymphatic glands are ordinarily attacked, whereas in adults the tendency is to infection of the lungs without obvious involvement of the lymphatics. It is likely that the route by which the lung is infected is often by the cervical lymphatics across the pleura to the apex of lung, and in support of this is the frequent presence of pleural adhesions in the neighbourhood of the pulmonary lesion, and the fact that phthisis is often ushered in by an attack of pleurisy. Evidence is accumulating to show that tuberculous infection usually takes place in early life, and that it may remain latent for a prolonged period in the lymphatic system. In cases of pulmonary phthisis in adults it is quite possible that the disease may be due to bacilli which have entered the system in childhood and remained quiescent for many years.

Children are peculiarly exposed to the infection of tuberculosis, both in milk and in dust, the latter on account of their proximity to the floor and their habit of putting everything into their mouths. Waldeyer's ring of lymphoid tissue, comprising the naso-pharyngeal tonsil or adenoids, the faucial tonsils, and the lingual tonsil, provides frequent opportunity for the entry of the bacillus tuberculosis. Much work has been done in investigating the presence of tuberculous lesions and bacilli in adenoids removed from ordinary, apparently non-tuberculous cases; the results have differed very widely, some authors having found as many as ten per cent. of tuberculous lesions, and six per cent. containing tubercle bacilli. In any case there is no doubt that the bacilli can reach the lymphatic system without producing lesions at the site of

entry. Tuberculosis of the cervical glands is certainly caused by infection through adenoids and tonsils. Besides this, simple inflammatory enlargement is extremely common in children, and is most frequently the result of septic absorption from the faucial lymphoid tissue. A chain of shotty glands along the posterior border of the sterno-mastoid is almost pathognomonic of adenoids, and an enlarged gland below the angle of the jaw is very commonly associated with an unhealthy tonsil. It is probable that this inflammatory condition lowers the resistance of the gland and makes it more likely to afford a lodgment to the tubercle bacillus.

It has been estimated that a half to a third of the cases of enlarged cervical glands are tuberculous. Peters mentions three types of gland which commonly contain tubercle bacilli: (1) The large gland, soft to the finger, exhibiting either pearly tubercles or caseous degeneration; such contain tubercle bacilli in large numbers. (2) The large, hard, homogeneous gland, which reveals giant cells and relatively few bacilli. (3) Slightly enlarged nodes, which may contain bacilli, but no tuberculous structure. Tonsils and adenoids are the first large collection of lymphoid tissue met by the air and food; while they subtract a certain number of bacteria they cannot be considered to act as an effective barrier, and, when affected by inflammation, they provide every opportunity for septic absorption. It is a matter of everyday clinical experience that enlargement of cervical glands frequently subsides after removal of unhealthy faucial lymphoid masses. At the same time, the presence of adenoids and tonsils results, in children, in a considerable degree of malnutrition which predisposes to infection, and also produces chest deformities, which have always been considered to be associated with the tendency to phthisis. To sum up, it is clear that the presence of unhealthy masses of lymphoid tissue in the nasopharynx and fauces not only predisposes to phthisis but is the direct cause of the entrance of tubercle bacilli into the lymphatic system, and it is by no means improbable that this is a common mode of infection in pulmonary tuberculosis.

The action of the healthy nose in filtering the inspired air is so well known that it would naturally be expected that, when this action fails, the tendency to phthisis would be increased; and this will still be the case even if the disease be not due to direct inhalation, for in cases of nasal obstruction the bacilli inhaled by the mouth impinge on the fauces and thus enter the system. Indeed, it is hardly possible that pulmonary infection can occur by direct inhalation through the healthy nose, for air which has passed through the nares has been shown to be sterile. The nasal mucus is not actively bactericidal; the bacilli become entangled in the mucus and are partly removed at the nostrils, partly pass backwards over the fauces where they may be absorbed, and some are swallowed, and may later pass through the intestinal wall. The effect of the

* *Tuberculosis in Infancy and Childhood: Its Pathology, Prevention, and Treatment.* By various writers. Baillière, Tindall, and Cox. 1908.

absence of nasal filtration is definitely shown by the tendency to phthisis among patients on whom tracheotomy has been performed; atrophic rhinitis, also, in which nasal filtration is absent, is generally considered to predispose strongly to phthisis. Nasal obstruction is so common that its effect in the causation of phthisis is somewhat difficult to estimate, but many medical officers to sanatoria consider it to be

an important factor, and a large experience at a consumption hospital has given grounds for the opinion that nasal obstruction is far more common among consumptives than among the normal population. In this connection Peters examined 43 consumptives and found 31, or 72 per cent. with definite obstruction, and only four with perfectly free nasal breathing.

MOTURING NOTES.

THE SINGLE-CYLINDER CAR.

HAVING frequently in these columns urged the manifold advantages of the small single-cylinder car for the medical motorist's use as compared with the larger type with many cylinders it gives me pleasure to quote the opinion of Mr. Douglas Fawcett, the well-known motorist. Writing in *The Motor* he says: "A word to the small car owner who is apt to shrink from travelling abroad. There is no occasion to tour in a large, or even in a medium-sized car; touring in couples in small two-seaters is great fun. Resort to powerfully-engined cars is entirely unnecessary. You can cross France in an eight h.p. car from Havre or Boulogne and reach the Alps easily in three or four days with far more appreciation of your surroundings than you would have if you rushed along in a dust-raising behemoth which is devouring a set of tyres. I would not exchange my small two-seater for anything which runs on the road, and assuredly I would not be bothered by four cylinders or, indeed, complications of any kind. Time was when folk would write of the 'noisy propensities' of one-cylinder cars, and the expression lingers yet, I regret to note, in the pages of the *Motor Manual*. But the best one-cylinder cars of to-day are quieter than were four-cylinders two years ago. In fact my own small De Dion (B.N. 1909) is one of the quietest cars I have come across this year. The folk at Chamounix frequently express surprise, comparing it very favourably with its larger sisters here, and one garage proprietor actually came out and congratulated me on the possession of my neat and silent little 'four.' Anxious as ever to further the cult of the one-cylinder car—in my opinion, the best all-round motor vehicle yet constructed for couples who tour far afield—I will give in brief the reasons which induce me to recommend it:—(1) Complete reliability and simplicity combined with comfort. (2) Ease of the 'garage' work. No morning overhaul—a turn of the handle and you are off. Any greasing, etc., which may be necessary from time to time can be done in odd moments. (3) Obvious lightness on tyres—a small two-seater with 760 mm. by 90 mm. covers, and thick raised tread, is practically immune from punctures, while the general tyre wear is of little account. Let me add that I have driven five De Dion one-cylinder cars and have never had to buy a new cover. The re-treading of two back covers has accounted for all my extra outlay. (4) Petrol consumption is low, and in view of the ease of maintaining efficiency in the case of one-cylinder (firing point admitting of perfect adjustment as you run and carburation being perfected by free use of air lever) is easily kept so. (5) The small car is par-

ticularly satisfactory on very long steep climbs, four-cylinder cars often overheating in the Alps. It does not, I find, ever suffer from such overheating. (6) The best small cars wear very well. The one-cylinder engine, e.g. does not require to be 'taken down' after its first or second season; a hideous necessity and a costly one to boot. (7) Pace ample. I may say that in a test made by me between Langres and Gray in a recent run from Paris to Switzerland, 59 kilom., or say 37 miles were covered in one and a quarter hours, giving for a vehicle with engine of only 100 mm. by 120 mm. the average of 29 $\frac{3}{4}$ miles per hour. The same car ascends to Chamounix on the second speed (where necessary) at 16 or 17 miles per hour. In view of the enormous field of pleasure touring open to such a car, I want nothing better. Complications as favoured by the owners of small four-cylinder cars I have no use for." It is a source of satisfaction that the type of car which has been consistently advocated in these columns as the most suitable for a medical man's use, especially the doctor who does not keep a chauffeur, should be so strongly recommended by a motorist of Mr. Douglas Fawcett's reputation. Mr. Fawcett does not of course allude to the single-cylinder car as suitable for the medical profession, but it is obvious that a car which possesses so many advantages for continental touring and the very arduous work of Alpine climbing, in which it is superior to the larger multi-cylinder type, must of necessity be the vehicle most suitable for the hard every-day work of the country doctor.

CORRECT PROPORTION OF GAS AND AIR.

In these days of automatic carburettors the control of the mixture is on many cars taken out of the hands of the driver. This may seem an advantage to the novice, but every experienced driver and especially old motor-cyclists know well that automatic carburation can never be quite satisfactory under all running conditions. On cars which are not fitted with this latest "improvement" and in which the mixture is controlled by the driver it is advisable to experiment with the air opening so as to obtain the best mixture which is suited to the density of the atmosphere—such experimenting, of course, is necessary, as the proportion of air will vary with climatic conditions, though the carburettor is not so sensitive with a larger engine and with a spray carburettor as to necessitate alteration in the proportion of air in a slight change of such conditions. Clearly the air openings on many carburettors might well be larger; otherwise additional air valves would not be in such demand or add so much to power and petrol economy. "VIATOR."

MEDICO-LEGAL POINTS.

THE MEDICO-LEGAL ASPECTS OF POISONS—I.

DEFINITION OF A POISON.

THE means of ascertaining the traces of poisons, either on the living or the dead body, is one of the most important subjects in legal medicine, and its importance is only equalled by its difficulty. What is a poison?

The ancients considered everything as poisonous that produced malignant symptoms, and attacked what may perhaps be styled the vital principle. The common ideas of poison by the moderns, on the other hand, is that it is a substance which, on being applied in one or other way to the human body, is capable of destroying the action of the vital functions. It is difficult, however, to give a definition to the term which will meet the signification attached to it by different classes of persons; for while, in common language, poisons are understood to be those articles only which are deadly in small doses—as strychnine, prussic acid, arsenic, etc.—the lawyer and the physician will unite in affixing to it a much wider meaning.

Every medical practitioner is aware that very many active remedial substances, which are not injurious when taken in ordinary amounts, may, in an overdose, produce serious and fatal effects. Moreover, questions may arise as to the applicability of the term to substances which destroy life by mechanical irritation, such as powdered glass, etc., although the administration of such substances to another, with intent to injure, is made a criminal offence in the various penal codes. Section 11 of the 24 and 25 Vict. c. 1 enacts that "Whoever shall administer, or cause to be administered to, or taken by any person, any poison or other destructive thing, with intent to commit murder, shall be guilty of felony." The French law interdicts the wilful administration of any substances "which, without being of a nature to produce death, are injurious to health."

LEGAL QUIBBLES.

Chief Justice Cockburn, in *Reg. v. Henna* (Cornwall Lent Assizes, 1887), supported the ingenious contention of the defence "that there must be a distinction between a thing only noxious when given in excess, and a thing which is a recognised poison and is known to be a thing noxious and pernicious in its effects; that unless a thing was noxious in the quantity administered, it cannot be said that there has been a noxious thing administered." Passing over the discussion as to whether cantharides, used in the case from which the above quotation is taken, is primarily a poison because it is placed in the schedule of the English Act for regulating the sale of poisons; such as strychnine, prussic acid, etc., we are more concerned with the principle of what constitutes a poison than whether the dose of the substance administered is sufficient to cause death. If the definition of a poison is dependent upon the quantity administered, as an established fact in medical jurisprudence, the present list of poisonous

substances must be modified by a statement of the dose of a substance which makes the substance act as a poison.

It would appear to be much better to leave to the competent medical expert, who should be abreast of the times with the known results of modern technical sciences to inform in each case brought for trial or judicial inquiry whether the quantity of the substance supposed to have caused death would ordinarily have been injurious to bodily health, and in what way it may have brought about the death. If such a method should be followed less confusion would result than from a prolonged discussion upon the meaning and play of words and terms.

IMMUNITY TO POISONS.

Cases in which a really poisonous substance has been taken with impunity are more rare. In the majority the immunity is only comparative, the person being affected merely in a less degree than is usual. This important consideration must not be overlooked, for there are many cases recorded in which, for instance, among other deleterious medicines, opium, arsenic, belladonna, digitalis, chloral hydrate, and even strychnine, have been taken with impunity in amounts usually considered fatal to mankind. It follows, therefore, that the use of definite words or phrases to restrict or confirm a schedule of poisons as a medico-legal requirement is in general inadvisable. The medical expert should be well qualified to explain clearly to the court in what manner the substance in a given manner may, or usually does, destroy life, and the amount of it required to be in contact with the tissues, the life and functions of which when alive are shown by him to have been destroyed.

The remarkable resistance that is sometimes observed to the action of poisons deserves notice. Among the Hungarians the seeds of the *Palma Christi* are often taken to the amount of thirty-six grains without any inconveniences, and some of the French peasantry use a decoction of *colocynth* as a common purgative. The common dose of the extract of *aconitum napellus* is one or two grains, and it is deemed dangerous to use it in large quantities; but Foderé was consulted concerning the case of Charles IV. of Spain, who, while residing at Marseilles, was attacked with rheumatic gout, and he recommended the medicine in question. M. Soria, the king's physician, replied that at a former period it had been administered for a length of time, and to such an extent that the patient took a drachm daily without any good or evil effects (Foderé, vol. iii. p. 463).

The fumes of mercury, of lead, and of copper are well known to be injurious to those who inhale them; yet no fact is better established than that of workmen resisting their effects for many years. Such extraordinary instances should, above all, never influence us in legal medicine, nor lead us

to the idea that because one person has taken a particular substance without any ill effects, it is, therefore, not a poison.

DIFFERENCES BETWEEN MAN AND LOWER ANIMALS.

There is another curious fact connected with this subject which it is proper to mention. It is the different effects which some substances produce on man and other animals, being noxious to the one and innocuous to the other, and *vice versa*. Thus, sweet almonds are said to kill dogs, foxes, and fowls; aloes are destructive to dogs and foxes; pepper to hogs; and parsley to the parrot. On the contrary, hogs feed on henbanes, pheasants on stramonium, and goats on water-hemlock with impunity. Many, however, of the principal poisons produce similar results on man and other animals, and in none, probably, is the resemblance greater than with the dog. The rapidity of the action of poisons varies considerably. Concentrated hydrocyanic acid destroys an adult man almost in an instant, whilst others take away life within an hour, a few hours, a day, or a longer period. Some, indeed, when the sufferer escapes the immediate consequences, prove fatal after months or a year, but with a sufficiently marked train of symptoms to indicate with certainty the original cause. It is on this account that no particular period has been introduced in the laws of some countries; and, if the poisoned person dies the criminal is to suffer punishment.

PTOMAINÉ POISONING.

The idiosyncrasy which converts a harmless substance into a poisonous agent is very frequently observed in the case of articles of food. Thus mussels, fish, pork, and mutton have frequently given rise to all the symptoms of irritant poisoning. It should be remembered, however, that the symptoms in these cases may result as well from the mechanical irritation of the food—too large a meal having been taken—or from the fact of its being in a condition unfit for use; while some meats become poisonous because they are infested with animal parasites, or from commencing putrefaction. There is another source of food poisoning which should

not be overlooked; we refer to the meat which is sold in tin cans.

If in preparing these canned meats care is not taken to drive out the atmospheric air by thoroughly boiling the liquid contained in them, there may occur a decomposition which will produce an injurious substance. This may not necessarily cause death, though it does commonly produce serious gastro-intestinal disturbances, such as diarrhoea and colicky pains, which may simulate a diseased condition. It was formerly supposed that this train of symptoms was due to the action of the zinc and lead compounds used in soldering the cans, but it is more likely caused by products of fermentation processes, which are favoured by the contained air. It should be remembered that these deleterious substances cannot always be readily recognised by taste and smell. The medical expert should be qualified to recognise the micro-organisms by the aid of the microscope and their propagation in cultures.

THE FACTORS OF DOSE AND DISEASE.

The quantity of any poison which may cause injury to the living tissues in the human body and destroy their functions of life is dependent, not so much upon the amount of the substance which is administered by the mouth, as by the amount which is absorbed. This is also dependent on the rapidity of the elimination after the ingestion. If the substance is removed very rapidly by vomiting or diarrhoea, and without causing serious injury to the tissue of the alimentary canal, an amount may remain to be absorbed by the blood insufficient to produce a poisonous action upon the general system.

Disease also has sometimes the effect of rendering the system tolerant of substances which would be poisonous in the same doses in a healthy state of the system. In acute alcoholism, or alcoholic intoxication, the blood and tissues may be so loaded with alcohol as to interfere wholly or partially with the absorption of a poisonous agent. During the active stage of severe inflammatory and febrile diseases, mercury may be given in large and repeated doses without producing salivation.

PRACTICAL NOTES ON DIAGNOSIS AND TREATMENT.

X-Rays in Leukæmia.

SUFFICIENT evidence has been brought forward in recent years to show that the x-rays are capable of exercising a beneficial action in many cases of myelogenous leukæmia, although the benefit may be only temporary. After a time the patient appears to acquire a sort of immunity to the rays and ceases to derive any benefit therefrom.—*Drs. Emanuel and Mackey.*

Acute Synovitis of the Knee.

It is a common practice to apply ice immediately, with a view, I suppose, to arresting the bleeding. That ice does at times to some degree relieve pain by rendering the part more or less numb, I have no doubt; but that it helps to avert the bleeding there is, I fancy, no evidence, and it is not always harmless.—*Sir W. H. Bennett.*

Gunshot Wounds of the Abdomen.

EXPERIENCE has abundantly proved that laparotomy in the field is more dangerous than the gunshot wound for which it is performed. Surgeons of great eminence, who saw large numbers of gunshot wounds of the abdomen in South Africa, admitted that no amount of experience of these cases enabled them to form any opinion as to the course that a gunshot wound of the abdomen would follow.—*Major Spencer.*

The Prognosis of Infantile Paralysis.

BROADLY speaking, any muscle which still reacts to faradism after ten days, even though still apparently paralysed, will probably recover. More than this, even a muscle whose faradic excitability is lost may recover to a considerable extent under appropriate treatment.—*Dr. Purves Stewart.*

OPHTHALMOLOGY.

NOTES ON OPHTHALMIA NEONATORUM.

By PHILIP A. HARRY, M.D., D.P.H.

THE statistics of the Ophthalmic Department of this hospital* for the last ten years show practically the same number of cases each year, with a slight tendency to increase. The average number lies between 20 and 25. The disease has a seasonal incidence, the greater number of cases occurring in spring and summer. In autumn and winter, especially in cold years, the cases are less severe and the complications not so numerous.

Only complicated cases are admitted, chiefly on account of intense oedema of the lids, purulent nasal discharge, and corneal infections. The corneal lesions varied from a slight haze to a total necrosis. In one case the sloughing cornea presented a peculiar honeycomb appearance. Dry xerotic cornea has also been noticed. Slight and uncomplicated cases of more than three or four weeks' duration are not admitted, but are treated daily as out-patients.

For the year ending June 30, 1909, there were 29 admissions; 21 of these patients had not been attended by a medical practitioner.

First and second children were those most often affected. In two cases, the tenth and eighth children were attacked, but in both instances inquiry showed that they were first-borns of a second marriage. With very few exceptions it was found that the mother suffered from a purulent vaginal discharge for some time before the birth of the child; the importance attached to this by the Ophthalmia Neonatorum Committee is certainly not uncalled for.

The following case emphasises this point: Mrs. C., aged 32, married twelve months previously, brought a male child for advice and treatment. The history was that he was 14 days old and a twin. The second child was born 11½ hours after the first; no instruments were used; the head of the first child was born some time before the rest of the body. On the third day it was noticed that his lids were swollen and a discharge was coming from the eyes. The medical attendant saw the child once and recommended hourly bathings with boracic lotion; no drops were used. A fully trained nurse was also in attendance, the mother was certain that immediately after the birth the child's eyes were carefully wiped with separate pieces of cotton-wool and the head bathed first from a separate bath than that in which the rest of his body was washed. In answer to a direct question, she replied that she had a discharge for a long time. Examination of the child showed that he was a poorly developed emaciated infant; the lids were red and the margins covered with a thick yellow discharge. Careful separation of the lids with a small-sized Desmarre's retractor showed also that the lower parts of both corneæ were ulcerated. The child was admitted. The second child did not develop the disease. This interesting case emphasises the fact that prophylaxis to be successful must be directed towards purulent discharges in the mother.

Complicated labours were very rare among the 29 admissions, as 73 per cent. were attended by midwives alone. In the majority of these cases no history could be obtained of any prophylactic measures having been taken to prevent infection of the child's eyes, not even the precaution of cleaning the head and face before the body.

The cases admitted fall, roughly, into three classes—early cases brought by the friends or neighbours within the first week of onset; late cases in the third or fourth week brought by the mother; and an intermediate class, infants from 10 to 14 days old, also brought up by the mothers.

Three-fourths of the cases fall in this latter group; they are usually severe because the mother has waited until she is able to get about before bringing up the child. The treatment at home has been most inefficient, consisting very often only of the "dropping in" of a little boracic lotion occasionally; corneal complications are consequently present in more than 50 per cent., and the stay in hospital averages three to four weeks. The early cases are usually discharged cured at the end of a week; the late cases take a fortnight, more or less. The mothers are always strongly advised to come into hospital with their infants, especially those of the intermediate group.

Infants admitted alone rapidly lose ground; they become pale and emaciated, their digestive functions are easily impaired, and the power of resistance decreases. In the last five years there have been six deaths among the children of this class admitted without their mothers. It is frequently found, too, that after their return home they thrive badly owing to convulsions and intestinal troubles.

Babies of over four weeks are rarely admitted, except when frequently repeated relapses threaten further complications. Microscopic examination shows that these are nearly always mixed infections. On or before admission an examination is made of the discharge from the eyes, and from the nose should there be a nasal discharge as well. The gram-negative diplococcus of Neisser is practically always found in the film. A culture of the organism can also be made for the purpose of producing a vaccine.

As soon as possible, as part of the routine treatment, the external canthi are slit for about a quarter of an inch, to facilitate the proper cleansing of the conjunctival sac. The nurse whose sole duty it is to look after these cases carefully washes, every half hour, the everted lids and fornices. The lotions in chief use are glycothymolin, 1 in 5; boracic acid, 5ij to the pint; potassium permanganate, 1 in 5,000. Alum lotions are said to dissolve the cement substance of the cornea. Mercurial lotions also are not commonly used, on account of their deleterious effect on the cornea, as well as certain other bad results, to be mentioned later. Within the first 24 or 36 hours, when the discharge is thin and serous, the lotion is kept cold

* The Leeds General Infirmary.

by means of lumps of ice. Results show that these early cases respond very readily to prompt and careful treatment. After the third day the lotion is used at body temperature; the discharge has now become purulent.

The morning after the canthi have been slit the mucous membrane of the lids is painted with a strong solution of silver nitrate, gr. xx to the ounce. This causes a temporary increase in the oedema of the lids and a superficial slough, which takes some days to separate. Argyrol drops, 20 per cent, are instilled every four hours. In a few cases 1 c.c. of a vaccine, containing 50 to 75 million gonococci, has been injected into the buttock, without definite benefit. No bad results were, however, noted. There was never even a rise of temperature.

The discharge markedly decreases by the fifth or sixth day; notwithstanding this, treatment should be persevered with for ten days altogether. Successful results depend on frequent bathing of the conjunctival sac, and an intelligent variation of the lotions according to the progress of the case. Instruments such as the flushing retractor and speculum are not recommended for douching. A 1 per cent. solution of atropine sulphate is used only when corneal complications are present: the solution is preferable to the ointment. Special attention is, of course, paid to the feeding of the infant.

It is not enough for the family physician to prescribe a lotion and see the child occasionally. Efforts to combat the disease must be thorough and unceasing. More often than not one finds after inquiry that only the outer surfaces of the lids, or at most the lid margins, have been mopped with the lotion, while the conjunctival sac and fornices are filled with purulent discharge. On the other hand, forcible separation of the lids by an inexperienced person may cause a corneal abrasion, which will become the seat of infection. It is almost impossible to evert the oedematous lids and reach the fornices without slitting their external angles. The operation is easily and quickly performed, and can be done in the wards without an anæsthetic. The infant's head is steadied by the nurse or between the operator's knee; with a sharp Graefe knife a small incision is made down to and through the orbicularis muscle, thus separating the lids and their outer angles. The incision is made from without inwards, the point of the knife being directed towards the temple. A pair of scissors is not recommended, because, even if very sharp, it causes more pain than a Graefe knife, and there is always the risk if the points are not very blunt of scratching or penetrating the cornea. The temporary disablement of the orbicularis, as well as the slight increase in the palpebral fissure render eversion of the lids an easy matter.

Hæmorrhage is never alarming; it has a beneficial effect on the oedema; pads may be applied if it does not stop quickly.

Artery forceps are never needed, except for older children with purulent ophthalmia. No scar is left afterwards, and the wound is quite healed at the end of a week; it never becomes infected. Care should be taken when painting the lids with silver

nitrate not to touch the wound, as it is very painful, and a persistent slough is apt to form. A 5 per cent. solution is preferred, because only one application is necessary, as the superficial slough takes some days to disappear; weaker solutions require to be used more frequently. The effect is kept up by the argyrol, which is certainly superior to all the silver preparations of its kind. It is not advisable to dust powders into the eye, not even if the particles are very fine.

Mercurial lotions have no advantage over the milder lotions, seeing that a cleansing rather than a sterilising effect is desired. Pallor and profuse salivation, which stopped after biniodide lotion was discontinued, were noticed in more than one case: and several years ago, when perchloride lotion was used stronger than at present, two infants died suddenly from acute gastro-enteritis a few days after admission. It is advisable, too, when the mothers have to do the eyes, that they be given a bland non-poisonous lotion. The disadvantage of the half-hourly treatment as carried out in hospital is the consequent disturbance of the infant's rest. It does not apply to cases treated at home, for obvious reasons. After the first 24 or 36 hours the eyes are bathed hourly or two-hourly only, during the night and as gently as possible.

In the very early cases, when the babies are on ice-cold lotion, care must be taken to keep them warm, especially after the eyes have been bathed.

Other points to be remembered are, that the child should lie on the side corresponding to the worst eye, to prevent the discharge or lotion trickling into the better eye, which should always be done first; and that in case the nurse has more than one child to look after, the same principle should be carried out. It is very rare for a child to be admitted with only one eye affected, although it is usual for the severity to be unequal. Attempts to seal up the good eye are not always effectual.

The mother and attendants should be warned about the possibilities of infecting their own eyes: it is, however, remarkable that, notwithstanding the close proximity of mother and child, one has never seen a gonorrhœal infection of the mother's eyes, whereas other conjunctival infections are readily transmitted; immunisation of the mother possibly has something to do with it. The child must be carefully protected from draughts or sudden changes of temperature, as relapses are not uncommon, and they retard progress.

With regard to after-treatment, the mothers are told to continue the treatment at home three or four times a day for several weeks. Cases of corneal opacities are given an ointment of thiosinamin and dionin in the proportion of 2 and 4 per cent. This is used for many months, varied occasionally with the yellow oxide of mercury (1 per cent.).

Staphylomatous globes should be excised. Some of the complicated cases were written for twelve or eighteen months afterwards. They nearly all developed nystagmus or strabismus; this was invariably the case when the cornea had perforated, as evidenced by the anterior synechia and anterior polar cataracts.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

HOSPITAL SUNDAY FUND.

THE BATTERSEA ANTI-VIVISECTION HOSPITAL.

THE Lord Mayor presided at the Mansion House on the 28th inst. over a meeting of the Council of the Metropolitan Hospital Sunday Fund. Among those present were Lord Cheylesmore, Lord Leith of Fyvie, Sir William Church, Sir Henry Burdett, Sir Savile Crossley, Sir Richard Martin, Sir John Bell, the Archdeacon of London, the Rev. E. H. Pearce, Sir Joseph Dimsdale, Prebendary Russell Wakefield, the Hon. Harry Lawson, the Rev. C. H. Grundy, and Sir Edmund Hay Currie (Secretary).

Sir William Church, in moving that the report be received and that the awards recommended be paid as soon as possible, pointed out that the list of awards included a hospital which had not been recommended before by the committee—namely, the Battersea General Hospital, better known as the Anti-Vivisection Hospital. He said that the reason why this institution had not appeared on the list in former years was that it was not founded and maintained with the sole object of relieving the sick and suffering poor of Battersea, but it was also founded and maintained for keeping prominently before the public the work of anti-vivisectionists. The name of the hospital showed that it had some other object than the relief of the sick poor. Then, again, the regulation of the hospital was such that the committee had always thought they could not include it in their list; the members of the medical staff were narrowed down to those qualified men who believed, rightly or wrongly, that no improvement was likely to take place in medical treatment in the future, because the whole of the civilised world had agreed that it was from the scientific experiments on animals that the knowledge of diseases was to be increased. No self-respecting medical man would for one moment consent to the governing body of a hospital, which consisted mainly of laymen, dictating to him his treatment of patients, which greatly narrowed the choice of the medical staff. It was these points, together with the general tenor of the annual report of the hospital, which had caused the committee not to bring the institution before the Council. This year the committee had been approached by various members of the Council, including some of the clerical members, who had testified to the great appreciation which the poor of Battersea had of the benefits which they received from this hospital. The committee, therefore, while disapproving, as much as ever, of the way in which the hospital was carried on, had brought the matter forward, and desired that the decision should rest rather with the Council than the committee. In the event of the Council's determining that a grant should be made, the committee desired to amend the grant and make it

double the sum which was set down in the list—namely, £97 10s., in order that the grant should be made on the full basis.

Lord Leith, in seconding the adoption of the report, said that looking at the matter from the standpoint of broad policy, he felt that the action of the Distribution Committee would do good.

Mr. Thomas Bryant said he would always consider that the Anti-Vivisection Hospital cast a great slur upon the profession generally, and that they ought not to support a hospital which was based upon such principles. Some years ago, when associated with the Bolingbroke Hospital, it was his duty to see the surgery of that institution, and a great deal of it consisted of neglected and badly-treated cases from the so-called Anti-Vivisection Hospital. He moved as an amendment that the grant to the hospital in question be omitted.

The amendment found no seconder and therefore dropped.

Sir Henry Burdett said he shared Mr. Bryant's objections, and believed that the majority of the Council agreed with this view. At the same time, they had to consider the difficulties of the case, including those difficulties which the clergy experienced in dealing with the matter. They were making this grant not because they approved of the institution, or disapproved of it any less than they had ever done, but simply because it might, and probably did, do a measure of good among the people of Battersea. He hoped its authorities would purge themselves of the pretentious humbug involved in the claims they put forward as to the special advantages of treatment in that hospital from the anti-vivisectionist point of view, because the medical profession knew perfectly well that in the treatment of disease they must employ remedies which would not have been available had it not been for the discoveries resulting from vivisection. He certainly thought that, in giving the grant, it should go forth that each year they had the right, and would exercise it, of considering how this hospital was being administered. It was given in the hope that the authorities of this institution would mend their ways, purge their methods, and, in fact, fall into line with all the best-administered hospitals in the country.

The report was then adopted.

Archdeacon Sinclair moved a vote of thanks to the Distribution Committee.

The Rev. C. H. Grundy hoped it would be distinctly understood that the award of the grant gave the Council the right to express their opinion on the administration of this hospital, and that it would not be thought they had swallowed their principles after a certain amount of agitation.

The resolution was adopted.

Sir Joseph Dimsdale moved that the thanks of the Council be given to the editors of newspapers who had pleaded the needs of the hospitals and who had advocated the cause of the Fund. In doing so he paid a warm compliment to the London newspapers for the services they rendered in the cause of charity and benevolence, and remarked that in the Hon. Harry Lawson, whom he was glad to see present, they had the representative of one of the

most charitable newspapers in existence. (Hear, hear.)

Sir Henry Burdett, in seconding the resolution, suggested that if the newspapers concentrated their assistance in the week immediately preceding Hospital Sunday a sum of £100,000 might be annually realised.

Cordial thanks were also given to the Committee of Distribution for their care in preparing the awards, and to the Lord Mayor for presiding.

ANNUAL REPORT

OF THE COMMITTEE OF DISTRIBUTION TO THE COUNCIL.

The Executors of the late Mr. George Herring will pay to the Treasurer of this Fund on July 27, £24,000, being the balance of income available from the Estate, which, with £1,352 received in dividends, etc., upon Securities transferred to the Fund, makes the total income from this source to date £25,352.

The Committee recommend that this sum be added to the collections, making the total of the Fund to date £67,951, in which is included £2,000 the balance of the Legacy of £10,000 under the Will of the late Mr. Herbert Lloyd, £900 being the Legacy, less duty, of Edwin Gayford, deceased, and £500 on account of the Legacy of the late Mr. C. E. Layton.

This year 258 Institutions have applied for grants from the Fund, being one less than in 1908. Two Institutions were considered ineligible. The Committee, while fully realising the excellent work carried on by the Cancer Hospital, have not made an award this year, for the reason stated in their report of 1906.

The Committee do not recommend awards to the Throat Hospital, Golden Square, or the Evelina Hospital, this year, as they do not appear to the Committee to be in need of funds.

The Committee now recommend the distribution of £67,212 to the 164 Hospitals and Institutions, 59 Dispensaries and 30 Nursing Associations shown in the Appendix hereto.

The Committee having reduced the bases of award in 17 cases, the fact was intimated to each of the Hospitals interested in accordance with Law V. Six deputations attended the Committee, and after hearing their several explanations the final awards were determined. Five per cent. of the total sum available for distribution is appropriated to the purchase of surgical appliances during the ensuing year, and 2½ per cent. for district nursing associations.

In compliance with an order of the Council, statistics have been prepared as usual for the special use of its members, showing the number of beds in Hospitals, the cost of patients at Hospitals and Dispensaries, the proportionate expense of management to maintenance, and other valuable information.

A copy thereof has been sent to each Member of the Council.

GEORGE WYATT TRUSCOTT,

Lord Mayor, President and Treasurer.

F. A. BEVAN.

JOSEPH C. DIMSDALE.

WILLIAM S. CHURCH.

ALFRED WILLETT.

SAVILE CROSSLEY.

F. H. NORMAN.

STAMFORD.

ROBERT GREY.

Mansion House, E.C., July 19.

THE AWARDS FOR 1909 AND 1908 COMPARED.

The following is a complete list of the awards recommended by the Committee of Distribution for the year 1909, compared with those for 1908:

THIRTY-THREE GENERAL HOSPITALS

	Awards			
	1909		1908	
	£	s. d.	£	s. d.
Charing Cross Hospital	1,328	3 4	1,530	0 0
French Hospital	385	13 4	399	7 6
German Hospital	709	11 8	708	15 0
Great Northern Central Hospital	1,272	18 4	1,260	0 0
Guy's Hospital	1,679	3 4	1,575	0 0
Hampstead General Hospital	449	11 8	376	17 6
Italian Hospital	218	16 8	225	0 0
Kensington General Hospital	Nil.		247	10 0
King's College Hospital	1,744	3 4	1,800	0 0
London Hospital	6,500	0 0	6,300	0 0
London Homoeopathic Hospital	473	8 4	495	0 0
Phillips' Memorial Homoeopathic Hospital	42	5 0	51	15 0
London Temperance Hospital	748	11 8	776	5 0
Metropolitan Hospital	1,022	13 4	1,125	0 0
Mildmay Hospital	305	10 0	337	10 0
Miller Hospital and Royal Kent Dispensary	276	5 0	270	0 0
North-West London Hospital	310	18 4	416	5 9
Poplar Hospital	619	13 4	545	12 6
Prince of Wales's General Hospital, Tottenham	877	10 0	736	17 6
Royal Free Hospital	1,457	1 8	1,462	10 0
St. George's Hospital	198	5 0	562	10 0
S.S. John and Elizabeth Hospital	203	13 4	371	5 0
St. John's Hospital, Lewisham	170	1 8	196	17 6
St. Mary's Hospital	2,551	5 0	2,610	0 0
St. Thomas's Hospital	208	0 0	168	15 0
Seamen's Hospital Society	1,703	0 0	1,665	0 0
The National Anti-Vivisection Hospital	97	10 0		
The Middlesex Hospital and Convalescent Home	2,784	3 4	2,700	0 0
University College Hospital	2,545	16 8	2,553	15 0
Walthamstow, etc., Hospital	141	18 4	151	17 6
Wandsworth, Bolingbroke Hospital	357	10 0	326	5 0
West Ham Hospital	549	5 0	601	17 6
West London Hospital	1,381	5 0	1,276	17 6
Westminster Hospital	1,386	13 4	1,428	15 0

SPECIAL HOSPITALS

SIX CHEST HOSPITALS

City of London Hospital for Diseases of the Chest, Victoria Park	920	16 8	900	0 0
Hospital for Consumption, Brompton	3,141	13 4	3,420	0 0
Mount Vernon Consumption Hospital, Hampstead	1,557	16 8	1,530	0 0
Royal Hospital for Diseases of the Chest, City Road	601	5 0	613	2 6
Royal National Sanatorium (Bournemouth)	108	6 8	112	10 0
Royal National Hospital for Consumption (Ventnor)	270	16 8	337	10 0

NINETEEN CHILDREN'S HOSPITALS

Alexandra Hospital for Hip Disease	360	15 0	433	2 6
Banstead Surgical Home	39	0 0	39	7 6
Barnet Home Hospital	54	3 4	61	17 6
Belgrave Hospital for Children	329	6 8	225	0 0
Cheyne Hospital for Incurable Children	108	6 8	146	5 0
East London Hospital for Children, Shadwell	969	11 8	1,006	17 6
Evelina Hospital for Sick Children, Southwark	Nil.		225	0 0
Home for Incurable Children, Hampstead	60	13 4	84	7 6
Home for Sick Children, Sydenham	162	10 0	171	0 0
Hospital for Sick Children, Great Ormond St.	1,191	13 4	1,096	17 6
Infants Hospital, Westminster	160	8 8	112	10 0
Kensington, for Children, and Dispensary	106	3 4	95	12 6
Paddington Green Hospital for Children	297	18 4	337	10 0

	Awards			
	1909		1908	
	£	s. d.	£	s. d.
Queen's Hospital for Children, Hackney Road	949	0 0	1,001	5 0
Royal Waterloo Hospital for Children and Women	195	0 0	202	10 0
St. Mary's Hospital, Plaistow	303	6 8	326	5 0
St. Monica's Hospital, Brondesbury	86	13 4	95	12 6
Victoria Hospital for Children, Chelsea	845	0 0	843	15 0
Victoria Home, Margate	43	6 8	45	0 0
Hospital for Hip Disease, Sevenoaks	59	11 8	56	5 0

EIGHT LYING-IN HOSPITALS

British Lying-in Hospital, Endell Street	130	0 0	119	5 0
City of London Lying-in Hospital, City Road	200	0 0	200	0 0
Clapham Maternity Hospital	52	0 0	45	0 0
East End Mothers' Home	91	0 0	84	7 6
General Lying-in Hospital, Lambeth	130	0 0	101	5 0
Plaistow Maternity Hospital	52	0 0	67	10 0
Queen Charlotte's Lying-in Hospital, Marylebone Road	553	11 8	579	7 6
Home for Mothers and Babies, Woolwich	80	3 4	45	0 0

FIVE HOSPITALS FOR WOMEN

Chelsea Hospital for Women	305	10 0	343	2 6
Hospital for Women, Soho Square	422	10 0	500	12 6
Grosvenor Hospital for Women and Children, Vincent Square	195	0 0	208	2 6
New Hospital for Women, Euston Road	17	6 8	399	7 6
Samarian Free Hospital Marylebone Road	426	16 8	455	12 6

TWENTY-THREE OTHER SPECIAL HOSPITALS

Cancer Hospital, Brompton	Nil.		Nil.	
Middlesex Hospital, Cancer Wing	257	16 8	292	10 0
London Fever Hospital, Islington	325	0 0	337	10 0
Gordon Hospital for Fistula, Vauxhall Bridge Road	47	13 4	50	12 6
St. Mark's Hospital for Fistula, City Road	228	11 8	292	10 0
National Hospital for the Diseases of the Heart, Soho Square	179	16 8	191	5 0
Female Lock Hospital, Harrow Road	240	10 0	281	5 0
Hospital for Epilepsy, Paralysis and other diseases of the Nervous System, Maida Vale	273	0 0	236	5 0
National Hospital for the Paralysed and Epileptic	1,084	8 4	1,091	5 0
West End Hospital for Diseases of the Nervous System	550	6 8	472	10 0
Central London Ophthalmic Hospital, Gray's Inn Road	167	18 4	196	17 6
Royal Eye Hospital, St. George's Circus	312	0 0	360	0 0
Royal London Ophthalmic Hospital, City Rd.	1,097	8 4	1,248	15 0
Royal Westminster Ophthalmic Hospital, Charing Cross	132	3 4	185	12 6
Western Ophthalmic Hospital, Marylebone Rd.	122	8 4	118	2 6
Royal National Orthopaedic Hospital, Great Portland Street	290	6 8	225	0 0
Royal Sea Bathing Hospital, Margate	205	16 8	213	15 0
St. John's Hospital for Diseases of the Skin	81	5 0	56	5 0
St. Peter's Hospital for Stone, Covent Garden	62	16 8	135	0 0
Central London Throat and Ear Hospital, Gray's Inn Road	10	16 8	19	2 6
Hospital for Diseases of the Throat, Golden Sq.	Nil.		16	17 6
London Throat Hospital, Great Portland St.	24	18 4	28	2 6
Royal Ear Hospital, Dean Street	40	1 8	51	15 0
Royal Dental Hospital of London	355	6 8	416	5 0
National Dental Hospital, 149 Great Portland Street	48	15 0	33	15 0

THIRTY-FOUR CONVALESCENT HOSPITALS.

Metro. Convalescent Institution, Walton	444	3 4	478	2 6
" " Broadstairs	292	10 0	303	15 0
" " Bexhill	552	10 0	573	15 0
All Saints' Convalescent Hospital, Eastbourne	433	6 8	450	0 0
All Saints' Convalescent Home, St. Leonards-on-Sea	27	1 8	28	2 6
Ascot Priory Convalescent Home	92	1 8	95	12 6
Brentwood Convalescent Home for Children	10	16 8	11	5 0
Charing Cross Hosp. Conv. Home, Limsfield	65	0 0	73	2 0
Chelsea Hospital for Women Convalescent Home, St. Leonards	48	15 0	50	12 6
Metropolitan Hospital Home, Cranbrook	16	5 0	39	7 6
Deptford Medical Mission Conv. Home, Bexhill	19	10 0	20	5 0
Mrs. Gladstone's Convalescent Home, Mitcham	92	1 8	95	12 6
Friendly Societies Convalescent Home, Dover	108	6 8	112	10 0
Hahnemann Convalescent Home, Bournemouth	32	10 0	33	15 0
Hanwell Convalescent Home	15	3 4	13	10 0
Hastings, Fairlight Convalescent Home	26	0 0	31	10 0
Hendon, Ossulston Home	71	10 0	64	2 6
Herbert Convalescent Home, Bournemouth	21	13 4	22	10 0

	Awards			
	1909		1908	
	£	s. d.	£	s. d.
Herne Bay Baldwin-Brown Convalescent Home	65	0 0	67	10 0
Homoeopathic Hospital Con. Home, Eastbourne	10	16 8	16	17 6
Hemel Hempstead Convalescent Home	21	13 4	31	10 0
Mrs. Kitto's Convalescent Home, Reigate	54	3 4	56	5 0
London Hospital Convalescent Home, Tankerton	78	0 0	81	0 0
Mary Wardell Convalescent Home for Scarlet Fever	65	0 0	67	10 0
Police Seaside Home, Brighton	54	3 4	50	12 6
St. Andrew's Convalescent Home, Clewer	108	6 8	112	10 0
St. Andrew's Convalescent Home, Folkestone	195	0 0	202	10 0
St. John's Home for Convalescent and Crippled Children, Brighton	24	18 4	22	10 0
St. Joseph's Convalescent Home, Bournemouth	48	15 0	56	5 0
St. Leonards-on-Sea Convalescent Home for Poor Children	108	6 8	112	10 0
St. Mary's Convalescent Home, Broadstairs	162	10 0	—	—
St. Mary's Convalescent Home, Shortlands	24	18 4	25	17 6
St. Michael's Convalescent Home, Westgate-on-Sea	37	18 4	39	7 6
Seaside Convalescent Hospital, Seaford	162	10 0	168	15 0

TWENTY-FOUR COTTAGE HOSPITALS.

Acton Cottage Hospital	98	11 8	91	2 6
Beckenham Cottage Hospital	88	16 8	92	5 0
Blackheath and Charlton Cottage Hospital	86	13 4	90	0 0
Bromley, Kent, Cottage Hospital	137	11 8	137	5 0
Bushey Heath Cottage Hospital	45	10 0	42	15 0
Canning Town Cottage Hospital	96	8 4	84	7 6
Chislehurst, Sidcup and Cray Valley Cottage Hospital	73	13 4	73	2 6
Coldash Cottage Hospital	23	16 8	24	15 0
East Ham Cottage Hospital	75	16 8	81	0 0
Eltham Cottage Hospital	85	11 8	69	15 0
Enfield Cottage Hospital	76	18 4	73	2 6
Epsom and Ewell Cottage Hospital	50	18 4	45	0 0
Hounslow Cottage Hospital	46	11 8	45	0 0
Livingstone Dartford Cottage Hospital	99	13 4	108	0 0
Kingston, Victoria Hospital	99	13 4	86	12 6
Mildmay Cottage Hospital	43	6 8	Nil.	
Reigate and Redhill Cottage Hospital	113	15 0	123	15 0
Sidcup Cottage Hospital	43	6 8	45	0 0
Tilbury (Pasmore Edwards) Cottage Hospital	54	3 4	56	5 0
Willesden Cottage Hospital	123	10 0	123	15 0
Wimbledon Cottage Hospital	61	15 0	61	17 6
Wimbledon (South) Cottage Hospital	58	10 0	66	7 6
Wood Green Cottage Hospital	75	16 8	66	7 6
Woolwich and Plumstead Cottage Hospital	54	3 4	56	5 0

TWELVE INSTITUTIONS.

Hospital for Invalid Gentlewomen, Harley St.	108	6 8	112	10 0
S. Saviour's Hospital and Nursing Home	108	6 8	112	10 0
Invalid Asylum, Stoke Newington	37	18 4	39	7 6
Firs Home, Bournemouth	41	3 4	42	15 0
St. Catherine's Home, Ventnor	21	13 4	22	10 0
Friedenheim Hospital for the Dying	342	6 8	355	10 0
Free Home for Dying, Clapham	111	11 8	126	0 0
St. Luke's House, Pembroke Square	169	0 0	180	0 0
Santa Claus Home, Highgate	65	0 0	68	12 6
Royal Mineral Water Hospital, Bath	54	3 4	56	5 0
Winifred House, Holloway	63	18 4	64	2 6
All Saints, Highgate	28	3 4	24	15 0
Sunshine Home of Recovery, Hurstpierpoint	Nil.		—	—

FIFTY-NINE DISPENSARIES.

Battersea Provident Dispensary	210	3 4	213	15 0
Billingsgate Dispensary	81	5 0	118	2 6
Blackfriars Provident Dispensary	19	10 0	22	10 0
Bloomsbury Provident Dispensary	16	5 0	16	17 6
Brixton, etc., Dispensary	53	1 8	56	5 0
Brompton Provident Dispensary	20	11 8	19	2 6
Buxton Street Dispensary	21	13 4	28	2 6
Camberwell Provident Dispensary	81	5 0	90	0 0
Camden Town Provident Dispensary	16	5 0	16	17 6
Chelsea, Brompton and Belgrave Dispensary	44	8 4	50	12 6
Chelsea Provident Dispensary	14	1 8	11	5 0
Childs Hill Provident Dispensary	15	3 4	16	17 6
City Dispensary	65	0 0	56	5 0
Clapham General and Provident Dispensary	24	18 4	28	2 6
Deptford Medical Mission	26	0 0	28	2 6
Eastern Dispensary	43	6 8	42	15 0
East Dulwich Provident Dispensary	57	8 4	54	0 0
Farringdon General Dispensary	55	5 0	45	0 0
Finsbury Dispensary	45	10 0	63	0 0
Forest Hill Provident Dispensary	40	1 8	42	15 0

	Awards		1908	
	£	s. d.	£	s. d.
Greenwich Provident Dispensary	36	16 8	39	7 6
Hackney Provident Dispensary	20	11 8	20	5 0
Hampstead Provident Dispensary	65	0 0	69	15 0
Holloway and North Islington Dispensary ..	17	6 8	22	10 0
Islington Dispensary	62	16 8	68	12 6
Islington Medical Mission	67	3 4	49	10 0
Kennington and Vauxhall Prov. Dispensary	15	3 4	15	15 0
Kensal Town Provident Dispensary	14	1 8	16	17 6
Kentish Town Medical Mission	22	15 0	23	12 6
Kilburn, Maida Vale and S. John's Wood Dispensary	37	18 4	45	0 0
Kilburn Provident Medical Institution	54	3 4	58	10 0
London Dispensary, Spitalfields	20	11 8	18	0 0
London Medical Mission, Endell Street ..	130	0 0	153	0 0
Margaret Street, for Consumption	33	11 8	34	17 6
Metropolitan Dispensary	67	3 4	74	5 0
Mildmay Medical Mission Dispensary ..	17	6 8	22	10 0
Notting Hill Provident Dispensary	19	10 0	11	5 0
Paddington Provident Dispensary	39	0 0	39	7 6
Public Dispensary, Drury Lane, W.C. ..	44	8 4	33	15 0
Queen Adelaide's Dispensary	27	1 8	30	7 6
Royal General Dispensary	28	3 4	30	7 6
Royal Pimlico Provident Dispensary	46	11 8	54	0 0
Royal South London Dispensary	50	18 4	51	15 0
St. George's, Hanover Square, Dispensary	36	16 8	30	7 6
St. John's Wood Provident Dispensary ..	56	6 8	57	7 6
St. Marylebone General Dispensary	58	10 0	60	15 0
St. Pancras and Northern Dispensary ..	39	0 0	36	0 0
South Lambeth, Stockwell, and North Brixton Dispensary	41	3 4	43	17 6
Stamford Hill, Stoke Newington Dispensary..	55	5 0	63	0 0
Tower Hamlets Dispensary	50	18 4	56	5 0
Walthamstow Provident Dispensary	16	5 0	18	0 0
Wandsworth Common Provident Dispensary	15	3 4	16	17 6
Westbourne Provident Dispensary	19	10 0	22	10 0
Western Dispensary	80	3 4	76	10 0

	Awards		1908	
	£	s. d.	£	s. d.
Western General Dispensary	109	8 4	113	12 6
West Ham Provident Dispensary	13	0 0	14	12 6
Westminster General Dispensary	48	15 0	51	15 0
Whitechapel Provident Dispensary	37	18 4	38	5 0
Woolwich Provident Dispensary	41	3 4	38	5 0
THIRTY NURSING ASSOCIATIONS.				
Belvedere, Abbey Wood	8	5 0	8	11 0
Brixton	28	0 0	27	6 0
Central St. Pancras	21	0 0	20	10 0
Chelsea and Pimlico	28	0 0	27	6 0
Hackney	33	1 0	34	4 0
Hammersmith	49	0 0	54	14 0
Hampstead	21	0 0	20	10 0
Isleworth	8	5 0	13	13 0
Kensington	49	0 0	61	10 0
Kilburn	8	5 0	8	11 0
Kingston	35	0 0	34	4 0
Metropolitan (Bloomsbury)	56	0 0	68	6 0
St. Olave's (Bermondsey)	28	0 0	47	16 0
Paddington and Marylebone	49	0 0	47	16 0
Peckham	8	5 0	..	..
Plaistow	78	10 0	68	8 0
„ (Maternity)	103	5 0	150	6 0
Rotherhithe	8	5 0	13	13 0
Shoreditch	63	0 0	88	16 0
Silvertown	12	8 0	12	16 0
South London (Battersea)	63	0 0	61	10 0
Southwark	42	0 0	41	0 0
South Wimbledon	20	13 0	21	7 0
Tottenham	7	0 0	6	16 0
Westminster	28	0 0	27	6 0
Woolwich	28	18 0	29	18 0
East London	182	0 0	177	13 0
North London	70	0 0	75	3 0
London District	525	0 0	492	0 0
Sick-Room Helps Society	14	0 0	8	11 0

NEWS AND COMING EVENTS.

MR. SYDNEY SCOTT, M.S., F.R.C.S., has been elected surgeon for diseases of the ear and throat to the National Hospital for the Relief and Cure of the Paralysed and Epileptic, vice Mr. Cumberbatch and Sir Felix Semon.

THE sixth annual meeting of the Queen Alexandra Sanatorium, Davos, was held at 11 Chandos Street, W. Lord Balfour of Burleigh, who presided, said he had lately visited the sanatorium; and since the building was finished there was no reason why it should not be opened in October. The Council expect to complete the building within the original estimate of £36,000. A donor, who wished to remain anonymous, had placed the sum of £25,000 at the disposal of the Council. The first charge on that sum would be the opening of the institution free of debt, and the rest of the money would be devoted, at the discretion of the Council, to the further extension of the sanatorium, the installation of Röntgen rays apparatus, and such other purposes as the Council might deem necessary.

THE annual meeting and dinner of the Brussels Medical Graduates' Association was held at the Garden Club in the "White City," Shepherd's Bush, on July 15, under the chairmanship of Dr. Richard Paramore, the president. Dr. Oliver, the guest of the evening, proposed the health of the Association, and this toast was replied to by the hon. secretary, Dr. Arthur Haydon. Dr. Haydon announced with satisfaction that, following his interview last year at Brussels with the University authorities, every one of the recommendations made by the Council has been accepted and carried into official effect. Thus at last the Association has been officially recognised by the University of Brussels. Dr. R. Paramore, Dr. Major Greenwood, and Dr. Arthur Haydon were elected respectively, president, hon. treasurer, and hon. secretary for the ensuing year.

THE latest British Pharmaceutical Conference was opened at Newcastle-on-Tyne on Monday evening, July 26, at the Armstrong College. The Lord Mayor and Professor Lebour, vice-principal of Armstrong College, delivered addresses of welcome. In the lecture theatre demonstrations were given, and various experiments were publicly conducted in the Armstrong Laboratory, the Herschel Laboratory, and in the electrical engineering department.

COL. NEEDHAM presided on July 26 at the half-yearly court of governors of the East London Hospital for Children. During the past six months in-patients numbered 958. The number of new out-patients was 16,344, and the attendances numbered 45,521. The expenditure for the half-year was £5,800. The excellent financial condition reported at the close of last year has unfortunately not been maintained, and there is now a deficit of £1,100. Plans are in preparation for constructing and equipping a much needed out-patient operating theatre, and for providing better accommodation for the casualty officers.

AT the closing session of the Health Congress at Leeds, Dr. D. A. Carruthers read a paper on "The Aims of Medical Examination." Dr. Kaye advocated early treatment of defects in children, and several papers were read upon "The Control of Infectious Diseases," while Dr. Thos. Orr contributed a paper on the mode of dissemination of diphtheria in schools. A resolution urging that, whether the Milk and Dairies Bill were passed or not this session, the Tuberculosis Order should not be withdrawn, was carried by a bare majority, and was subsequently withdrawn. Of the earlier papers read during last week, that on Preventive Medicine by Dr. Arthur News-holme attracted especial notice.

NURSING ADMINISTRATION.

THE IRON HAND OF THE STATE.

THE present condition of the agitation in favour of the State registration and State examination of nurses was exposed with great distinctness during the meetings held last week. As regards opinion in England, evidence was produced that sixty-seven matrons in London and one hundred and seventy-five matrons in the provinces were definitely opposed to it. Among the seventy-seven major training schools for nurses in London and in the provinces, only about sixteen matrons support the movement in favour of State registration. When the state of affairs is examined in other countries the position of the movement is seen to be even more forlorn.

In no country can direct progress be pointed to as the result of State registration. In America, where in some of the States success has attended an agitation conducted on somewhat similar lines to that with which English nurses are familiar, registration appears to be responsible for a distinct falling off in the length of training and in the desire of women to embrace the career of nursing. It is singular that a lady from New York, where the term of training prescribed by law is only two years, should venture, in addressing English nurses, to allude to English matrons as "opposed to meet the needs of suffering humanity."

Suffering humanity requiring the ministrations of well-trained nurses might do worse than seek them in the training schools of these same matrons, free from the paralysing action of the "iron hand": training schools where a probationer, instead of being rushed through a complicated and showy curriculum in two years under the influence of hasty legislation, is not considered capable of doing nursing duties until her character has been moulded and her powers fully developed by a course of training extending always to three and often to four years. So far from proving in the States an instrument of progress, State registration is practically proving a death-blow to the three-year system of training which was being welcomed by superintendents and managers previous to legislation. For wherever a State curriculum is established, the institutions preparing candidates for its examinations are forced down to a level low enough for the majority. The congress found an eloquent supporter of registration in Fräulein Karll. But what are the facts? In Germany the prescribed term of training is one year. The delegates from Sweden and Holland, invited to this country in order to bless registration, declared themselves emphatically opposed to it. In both countries they declared that nursing was not yet "ripe" for legislation, and by that very declaration they proclaimed the fact that registration does not in effect encourage progress, but invariably puts impediments in its way. It is least harmful where progress is not desired, and where the only aim is to crystallise a condition of affairs deemed practically perfect, and it is for this reason that heads of government departments and municipal institutions where rigid uniformity is the first desideratum are disposed to favour it.

Throughout the conference on the "International Standard of Nursing," State registration, State examinations, and the uniformity inevitably following in their train were constantly appealed to as a counsel of perfection and a symbol of progress, but nothing is plainer in the whole debate than the fact that State regulations have never done anything to improve the status or the training of nurses. In certain British colonies in which hospitals are State supported and State controlled a system of examination and registration has been carried out by those to whom the governing bodies of these institutions are responsible. The State, governing and supporting the hospitals, controls the conditions under which nurses are trained in them. The Local Government Board might in like manner very easily establish a pass examination in the Poor Law institutions of this country, and refuse to promote any nurses who failed in getting through. Who does not understand that this is a very different thing from invoking a heterogeneous Board to prescribe a hard-and-fast curriculum for nurses trained under every possible kind of condition, in institutions presenting every variety of administration, and governed by bodies chosen from among those who themselves find the money for their support?

The meeting with curious blindness of perception, failed to take into account one of the main factors in the situation, which is that the training of nurses cannot be regarded *per se*. Those who train nurses, still less the nurses who are trained, are not in a position to make decrees. If nurses desire to hand themselves over to the "iron hand of the State," would it not be prudent first to discover whether the supporters and representatives of the enormously costly institutions on which their training depends are like-minded? The training of nurses cannot be carried out in a college: it presupposes the upkeep of institutions of world-wide importance. Nurses are, after all, but one strand in a very complex system for the relief of suffering humanity, and it is idle for certain members of the profession to meet and pass resolutions as though their interests alone were to be regarded in a measure which would set up an outside body established by Parliament, capable of exercising a totally incalculable effect on voluntary institutions.

Without the absolute freedom characteristic of the voluntary charities of this country, it is hardly conceivable that the mighty achievements in medicine and surgery, no less than in nursing, during the last fifty years could have been attained. Is it reasonable to suppose that with the garnered sheaves in full view, with a sense of accomplishment cheering them on to fresh victories, the supporters of these charities, and those medical and nursing superintendents who have lent their lives to the struggle, should voluntarily fetter their action and hand over the control of the great pioneer nursing schools to a Board compelled to study the limitations of inferior establishments?

THE KING AT THE ORTHOPÆDIC HOSPITAL.

HIS MAJESTY THE KING, accompanied by the Queen and Princess Victoria, opened the new in-patient department of the Royal National Orthopædic Hospital, Great Portland Street, W. on July 23. The Royal party drove in semi-state from Buckingham Palace, and were cheered enthusiastically along the route. Their Majesties were received at the main entrance of the hospital by the Duke of Marlborough, president, Lord Denbigh, chairman, and the principal members of the governing body and of the executive and medical staff. The Royal visitors were then escorted to the west ward on the second floor, where a large company had assembled for the opening ceremony. The Duke of Marlborough read an address to their Majesties on behalf of the committee and governors of the institution. This stated that the committee of the King's Hospital Fund, anticipating great economies of management from a policy of amalgamation among special hospitals carrying on similar work in London, has urged the committees of the old Royal, National, and City Orthopædic Hospitals to amalgamate their funds, and therewith build a central institution. That building, which provided for 200 in-patients, principally children with malformations curable in the early stages, was the first realisation of the policy of concentration. Moreover, opposite the hospital a nurses' home had been provided and an out-patients' department, where last year 1,000 cases were treated, and where they had now installed a special orthopædic gymnasium. The cost of the buildings had amounted to about £75,000, of which £20,000 was still required. More than 400 patients were now waiting for admission.

His Majesty replied in terms of warm sympathy with the objects and principles of the new central institution, and in appreciation of the success which has attended the efforts of the authorities of the constituent hospitals, whose work among crippled children the Queen has always watched with deep interest. His Majesty warmly approved of the centralisation principle, and commended to the charitable public this practical outcome of hospital concentration. After his Majesty's speech, prayers were said by the Bishop of London, and Lord Denbigh made a number of presentations to the King. Subsequently their Majesties, with Princess Victoria, visited some of the wards on the first floor.

The hospital has frontages on Great Portland Street and Bolsover Street. The buildings are designed to hold 200 beds in the wards and 13 on balconies, and a resident staff of 22. The nurses' home, accommodating 50 persons, and the out-patients' department are connected with the Hospital by a subway under Bolsover Street. Mr. Rowland Plumbe, F.R.I.B.A., is the architect.

THE KING has approved of the appointment of the following gentlemen to the consulting medical staff of King Edward VII. Sanatorium, Midhurst, Sussex: Dr. John Mitchell Bruce, M.D., F.R.C.P., and Dr. Bertrand Edward Dawson, M.D., F.R.C.P.

At the last meeting of the London County Council the following ladies and gentlemen were appointed to serve for three years on the medical staff for the inspection of school children in London: Messrs. O. L. Addison, M.B., F.R.C.S.; E. E. Argles, M.R.C.S., L.R.C.P.; J. M. Bernstein, M.B., M.R.C.P.; S. A. Boyd, M.S., F.R.C.S.; W. P. S. Branson, M.D., M.R.C.P.; G. Chaikin, M.R.C.S., L.R.C.P.; J. L. Dick, M.D., F.R.C.S.; J. G. Forbes, M.D., M.R.C.P.; C. F. Hadfield, M.D.; L. A. Hawkes, M.D.; C. W. Hogarth, M.R.C.S., L.R.C.P.; A. J. Jex-Blake, M.B., M.R.C.P.; D. W. C. Jones, M.B., M.R.C.P.; F. C. Lewis, M.D.; T. J. T. McHattie, M.B.; A. Mair, M.D.; G. Milne, M.D.; J. P. O'Hea, M.B., F.R.C.S.; F. W. Price, M.D., M.R.C.P.; G. E. C. Pritchard, M.D., M.R.C.P.; O. K. Williamson, M.D., M.R.C.P.; and A. S. Woodwark, M.B., M.R.C.P. Misses M. M. Burgess, M.D.; H. B. Hanson, M.D.; H. K. Whittingham, M.B.; and I. E. Woodward, M.B.

THE Vacation Course in connection with the West London Postgraduate College, West London Hospital, Hammersmith Road, London, W., will commence on Monday, August 9.

THE CHALFONT COLONY FOR EPILEPTICS.

THE Sixteenth Annual Meeting of the Governors of the National Society for Epileptics, was held on Monday, July 19, at the London Offices, Denison House, Westminster. The chairman, Mr. Montefiore Micholls, said that during the past year a new home for 26 epileptic women was opened, and two homes for epileptic children (now completed) were commenced. Each of these three buildings cost about £3,500, and each was provided through the generosity of an individual donor—the Women's Home at the cost of Mr. Frederick Greene, the Boys' Home at that of the late Mr. C. A. Tate, and the Girls' Home at that of Mr. H. Woolcott Thompson. The Reports of the Executive Committee and Hon. Medical Staff for the year 1908 were received and adopted. From these it appears that the Colony has now accommodation for 224 adult patients, but since there are at least 40,000 epileptics in this country, of whom a considerable proportion would be suitable for treatment at Chalfont, the accommodation is clearly still quite inadequate.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For GOUT and RHEUMATISM.

Professor Immermann, Basle, Professor of Internal Medicine at the University:—

"Hunyadi János has invariably shown itself an effectual and reliable Aperient, which I recommend to the exclusion of all others. Never gives rise to undesirable symptoms even if used continuously for years."

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label. [2]

The Hospital

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SATURDAY, AUGUST 7, 1909.

THE UNENTERPRISING BRITISH PRACTITIONER.

WHATEVER may be the scientific attainments of our professional brethren in foreign lands, we cannot resist the conclusion that the average British medical practitioner, in town or country or colony, is superior in many vital and essential respects to his contemporaries in foreign countries. This, of course, is merely an expression of opinion which cannot be verified by any instrument of precision or supported by evidence equal to the test of severe and formal cross-examination. Nevertheless, we have strong support for this conviction in the series of articles, as yet uncompleted, upon foreign medical schools and methods, which has been appearing at intervals for many months in our columns, from the pen of our Special Commissioner. Even a casual study of these reports upon the great Continental and American medical centres cannot fail to confirm the idea or awaken the suspicion, that—whatever may be the opportunities and facilities offered by the leading foreign schools of medicine, and whatever the attainments and achievements of their professors and *alumni*—the system of medical education in London and Edinburgh and Dublin and Cambridge, for example, despite its anomalies and its drawbacks, continues to turn out practitioners of medicine more capable, more self-reliant, and more dependable, than the average of their colleagues conducting general practices in the towns and villages of other countries. This, we must repeat, is an assertion, an expression of opinion, and no more. But so is the well-accepted statement that the English Public School, in spite of its inferiority in methods of teaching, remains the admiration and the despair of every astute and wide-minded visitor to our country from the educational establishments of foreign lands.

The point is that the end is more important than the means. It is almost an axiom that Germany is the home and centre of pure scientific and of medico-scientific research, that the German temperament and frame of mind transcends our own by far in zeal and practical capacity for patient and productive scientific investigation. Nevertheless, there are strong grounds for believing that the British prac-

titioner of medicine, educated and brought up as he is upon haphazard and illogical lines, has a finer and firmer professional *common sense* than the generality of his Teutonic and other Continental colleagues. Within the ranks of the practitioners of our paradoxical islands we seem to see an abiding healthy scepticism of those new-fledged, half-hatched synthetic remedies and frothy hypothetical methods of treatment which (to judge by contemporary Continental medical journalism) are a perpetual source of excitement and speculation and fatuous experimentation to a large number of other European and trans-Atlantic medical men.

It will not we think be denied even by the youngest amongst us that a thorough knowledge and experience of the old and well-tried remedies is the only proper foundation and excuse for a reasonable inquiry into the virtues of any one of the innumerable new synthetic drugs whose dubious claims to notice and trial are pressed so urgently and so boisterously upon every British practitioner whose name and address is accessible to the German manufacturer or his English representative. It can scarcely be doubted that amongst our Continental colleagues there exists a friendlier and a more credulous attitude towards the blatant pretensions of unscrupulous drug houses, and towards the scarcely less fatuous and unprofitable outpourings of pseudo-scientific investigators, than is found in general among British practitioners. It is not fair, of course, to judge the whole medical profession of a nation by those among its members who allow their names to bolster up the latest unscrupulous additions to the commercial Pharmacopœia. But where there is much smoke there must at least be a little fire, and it is neither unkind nor unreasonable to apply the phrase *ex pede Herculem* to the profession of any country wherein the drug manufacturers exploit their wares upon the reckless, brazen, and unscrupulous recommendation of hordes of "venal physicians." It may be that the strict code of professional morality and manners enforced upon us in this country by a stern, unbending Medical Council is the sole check upon our tendencies to overt self-advertisement, commercial-

ism, and unethical practices of every sort: but we think not. Black sheep undoubtedly disgrace every walk of life, and those of our number who would if they dared besmirch our calling are certainly kept in check by the fear of penal arraignment before the official guardians of our professional honour and dignity in these islands. But we believe that our antiquated and contradictory British methods of general and medical education are not only favourable to the development of sound

practical common sense and ability, but also to the development of that pride in our profession and solicitude for its good name, which is its only sure protection from the ever-growing modern canker of commercialism and corruption. Thus it is that we can look with equanimity upon the exasperatingly dull and apathetic attitude of the average British practitioner towards the experiments, the achievements, and the absurdities of Continental scientific medicine, which seems at first glance so unenterprising and so grossly unprogressive.

THE ADDRESSES AT THE BELFAST MEDICAL MEETING.

LAST week we published a brief appreciation of this year's President of the British Medical Association, who was installed into his office during last week's annual meeting in the city of Belfast. Since those lines were written Sir William Whitla has delivered his Presidential Address before a large and most distinguished audience, and the other principal addresses of the Conference have also been delivered and reported throughout the British Press. Not only the President's Address and the popular lecture, but also the addresses in medicine and surgery, dealt with matters of great medical interest and importance, but also touched upon various matters of medico-social significance which make a direct appeal to the attention of educated laymen and students of social progress. With Sir William Whitla's "Survey of the State of Medical Education," and its strong and reasonable advocacy of reform in the students' curriculum, we propose to deal fully in our forthcoming annual Educational Number which will appear on Saturday, September 4. This will be a suitable opportunity for a careful inquiry into the groundwork of Sir William Whitla's indictment, and for comment and criticism of his proposals for reform in the methods and principles of medical education. The needs of to-day and the possibilities of to-morrow seem incompatible with any fixed and dogmatic outlook upon medical education; and, therefore, when a teacher and physician of high authority and long and wide experience speaks out his mind upon the flaws in the current curriculum, it is clearly necessary to give close attention to his words.

The addresses in medicine and surgery were respectively entrusted to Dr. R. W. Philip, of Edinburgh, and Mr. A. E. Barker, of London. Each chose a topic with which he has long been identified and upon which he is entitled to speak with certainty and conviction. Dr. Philip has long been regarded by Scottish practitioners, and particularly by those in touch with his work in Edinburgh, as the leading authority of that city

upon pulmonary tuberculosis, and not least in its clinical aspects. Therefore it was well that he decided to address the Belfast meeting upon the subject of "Progressive Medicine and the Outlook on Tuberculosis," and thus survey one of the greatest and most far-reaching problems of the present and the future. Dr. Philip cast his mind's eye backward over the past 35 years, and pondered over "the extraordinary revolution of thought which has occurred in little more than a generation" upon tuberculosis, its origin, nature, and prevention; and his address crystallised the progress which has been made in his own time in every department of the anti-tuberculosis campaign. Particularly interesting and valuable was his exposition and advocacy of "The Great Principle of Aerotherapy," and we have been pleased to hear this point emphasised in the non-medical press, and we hope that the echoes will not soon die away in the public mind. It is reasonable to foresee in a future and widespread practical acceptance by the public of the curative and preventive value of the open-air principle of treatment at least a partial solution of the tuberculosis problem.

The surgical address also was devoted to a survey of recent progress in thought and technique, and just as Dr. Philip took Tuberculosis, so Mr. Barker took Intestinal Surgery as a means of illustration. In each case the special field of activity chosen may reasonably be considered something more than typical of the immense general medical and surgical progress of the past 30 or 40 years. Moreover, just as the discovery of the tubercle bacillus and the complete acceptance of aerotherapy have revolutionised the fight against tuberculosis, so the advent of anæsthesia and of the antiseptic method of wound treatment have revolutionised abdominal surgery. Thus there are many points of similarity, both interesting and profitable to discover, between these two addresses; and the British Medical Association no doubt feels much satisfaction in the substantial value of this year's principal orations.

ANNOTATIONS.

A Legend with a Moral.

AMONG a large number of legends of the Cameroons, dealing quaintly with matters medical and non-medical, collected by M. Mansfeld and recently published in *Le Journal Médical Français*, there is one which explains the reason why the young of animals can walk as soon as they are born, whereas to the human infant this privilege has been denied. The account, which we have ventured to translate somewhat freely, runs as follows: "God created both men and goats; but to the first woman he gave a knife wherewith to sever the umbilical cord of her new-born infant. When the first kid was born into the world, his father, the buck, journeyed forth to seek the woman, and when he had found her he asked her to lend him the knife. But she refused, saying that the knife was meant only for the children of man. The buck thereupon complained to his Maker, who answered: 'The goats are in the right; I sent the knife for all. For his presumption and selfishness man will be punished. Henceforth the young of animals shall walk from the hour of birth, but the young of man shall only begin to walk at the end of a year . . .'" Like many other such legends and fables, this seems to prove that our earliest ancestors were somewhat lacking in the higher moral qualities, especially in their dealings with the brute creation. But whereas they (and their descendants) were punished by appropriate physical misfortunes or disabilities, the experimental physiologist of to-day is visited with questions in Parliament, and brown dogs, and abusive epithets, and sometimes—at the dawn of the silly season—with rival "world congresses," each culminating in a triumphant gaily-bannered mob-meeting in Hyde Park or Trafalgar Square.

Nature and Nurture.

As recently hinted in these columns, for the meantime the subject of eugenics has had about enough ventilation. Unfortunately, the man in the street wants plenty of practical deductions, and in this field there are as yet no data on which to found them. Indeed, the whole *Grenzgebiet* of medicine and heredity requires not discussion, but serious, toilsome, new investigation. Probably the most important passage in the recently issued report of the deliberations of the Royal Society of Medicine on this subject was Dr. Bulloch's short speech to this effect. Nevertheless, popularisers of the cause of Nature rather than nurture have missed one point, namely, the artificiality of the present time and the delusions consequent thereon. We live in an age of baby foods, culture fads, and nostrums of every description—to touch only on the physical side. The possessor of conspicuous natural bodily aptitude has only to patent some device and proclaim it loudly enough as the secret of success in order to make a fortune. This is divertingly shown in the case of one of the many existing "physical culturists"—persons whose claims are smiled at by physiologists such as those who lately reformed physical exercise in the Army. At the beginning

of this gentleman's career he was known to boast to an interviewer of exceptional powers from an early age, while later on, when commercial developments had supervened, it was system and régime, on the contrary, which had rescued him from semi-invalidism. Probably if one of the ladies whose shapely proportions (and lack of higher qualifications) are characteristic of the present musical comedy stage—if one of these ladies had cynical enterprise enough to "boom" energetically an ointment for developing the female figure, results would be highly remunerative too. In this country a national passion for athletics provides another rich field for similar exploitation. The man who "could play with a broomstick," if he is pecuniarily interested and worldly wise, obtrudes some mannerism of equipment on the public notice, and finds plenty of dupes to pay for it in expectation of success similar to his own. In fine, what this highly urbanised generation needs teaching is the truth of the old farmer's maxim, "Breed is stronger than pasture"; and a little plain speaking in this sense might do more than a much greater quantity of fine writing.

Sea Water and Oysters.

THE virtues of sea-water as a therapeutic agent in cases of dyspepsia and tuberculosis have been more generally recognised on the Continent than in this country. The fluid is given either in injections, or by the mouth, in small quantities before a meal, but this latter method owing to the disagreeably acrid taste of the water is not popular with patients. Carles and Laguet propose to overcome this difficulty, and at the same time to add to the efficacy of the treatment, by ordering patients to partake before meals of oysters which have previously been soaked in sea-water. The required amount of fluid has been found to be present in six large oysters. The clinical results of this treatment have been most favourable. The appetite is increased in a few days, and digestion improves. The flow of gastric juice is also increased, as shown by the examination of test meals taken before and after treatment. Clinically speaking, the oyster is a eupeptic medicament useful in many cases of anaemia and hypo-chlorhydria, and in tuberculosis with dyspeptic symptoms. The good effects of the sea-water are increased by the albumen, fat, hydrocarbons, and mineral salts, especially phosphates, contained in the oyster which is also rich in glycogen. The oyster is at once a tonic and a food-stuff. Its virtues, which were recognised as early as 1827 by Sainte Marie, have recently been overlooked owing to the accusations which have been levelled against it on account of its association with typhoid bacilli, so that it is only fair, in our epoch of justice, to assist once more in the rehabilitation and revenge of the succulent mollusc whose delights are forbidden to us so long as the months, however un-summerlike in other respects, remain conventionally unsuitable to oyster-eating.

MEDICAL OPINION AND MOVEMENT.

A RESEARCH, extending over three years, into the Enzyme Treatment of Malignant Disease associated with the name of Dr. Beard is published in the *Medical Record* by Dr. Bainbridge. The number of cases included is very large, and the completeness with which the treatment was applied and studied has been monumental; the very greatest care was taken throughout to follow exactly the directions of Dr. Beard, and the results are tabulated and checked with the utmost pains. From the summary of thirty conclusions, which may be taken as the final word on this subject, the following are worth quoting. The enzyme treatment as administered according to the suggestions of Dr. Beard, plus important details of *régime*, does not check the cancerous process; it does not prevent metastasis; it does not cure cancer. The injections are often painful, and many patients refuse to continue them. Because of the tendency of trypsin to disintegrate the tissues it may be a direct menace to life by eroding large blood-vessels or by overwhelming the system with tumour toxins; thus in some cases hastening death. *Injectio amylopsini* seems in some cases to diminish cachexia, but in others has no such action. Control cases given injections of glycerin and water, or sterile water only, plus the *régime*, did just as well as those on full enzyme treatment. The *régime*, by increasing the general resistance of the patient, may in some cases decrease the rapidity of the malignant process.

THE Clinical and Post-mortem Aspects of the Status Lymphaticus are discussed in the *Journal of Mental Science* by Mr. R. E. Humphry, who believes this condition to be not nearly so rare as many people suppose. He certainly has fairly good grounds for this belief, inasmuch as he has had personal experience of six cases, five of them in asylum patients. The physical signs and symptoms, as described hitherto, are indefinite, but this is because they have been insufficiently investigated. As far as the pathological anatomy of the disease is concerned he notes especially a peculiar pink colour of the enlarged glands, and also an invariable enlargement of the networks of milary glands in the stomach and intestines. These two signs, with a thymus weighing at least an ounce and multiple glandular swellings everywhere, are diagnostic of the condition. The only other diseases in which a thymus of that size is always found are thymus *totus*, exophthalmic goitre, and leukæmia; and less constantly in acromegaly, Hodgkin's disease, and myxœdema. The heart muscle is frequently flabby and friable, and fatty degeneration in its walls is common; nevertheless it does not convey the impression that death is due primarily to cardiac failure, and the cavities are nearly always empty; sometimes there is a small quantity of blood in the right auricle. Hypoplasia of the aorta and other arteries is sometimes described as an associated condition. In one of his cases the author found an intense nephritis.

CLINICALLY the symptoms and signs during life are very vague. Deaths from the status lymphaticus are commonest at fifteen to eighteen, though they have been recorded at all ages from one year to fifty. Females are less often affected than males, and an hereditary disposition is said to be proved. The disease is also more common in those of a lymphatic diathesis, and in the offspring of neuropathic stock. The persistent and enlarged thymus seldom, if ever, gives rise to appreciable dulness to percussion of the manubrium: on the contrary, says Mr. Humphry, by pushing the heart further from the chest wall in front, it lowers the upper border of superficial cardiac dulness, and this in the absence of emphysema he regards as rather an important sign of the presence of the thymus. The thyroid gland is often slightly enlarged. The pulse may be less well sustained than normally, and the liver or spleen may be enlarged to a variable extent. But none of these signs is sufficiently constant to be reliable. The cervical and inguinal glands are rarely more palpable than usual. Tonsils and adenoids are frequent; and the so-called pharyngeal and lingual tonsils, and even the uvula may be more or less large. The most important sign of all is the conspicuity of the circumvallate papillæ of the tongue, and of the mass of lymphoid tissue between them and the epiglottis—this is pathognomonic when it exists, but unfortunately its absence does not exclude the possibility of the disease.

THE ætiology of Bell's Paralysis, or Refrigeratory Facial Paralysis, as he calls it, is considered at length in *International Clinics* by Dr. Reik, of the Johns Hopkins University, who falls foul of the standard text-books in the English language on both sides of the Atlantic for their adherence to the neuritic explanation of this lesion. Most of them imply, he says, that the neuritis is a result of cold upon the trunk or terminals of the nerve; whereas what he regards as the true pathology of the condition is described by many French and German authorities, namely, an antecedent otitis media, not necessarily purulent or obstinate. Statistics are supposed to show that of cases of Bell's palsy some 3 per cent. are due to syphilis, 6 to 9 per cent. to chronic suppurative and necrotic otitis, and 70 to 75 per cent. to cold or rheumatism. His conception of the real origin of these latter cases is that in consequence of lowered local resistance owing to draught, cold, or immersion there is inflammatory swelling of the mucous membrane and a pouring out of exudate into the tympanic cavity. If there be any break in the facial canal-wall, no matter how small, sufficient to permit the entrance of fluid or of pathogenic bacteria, there exists the opportunity for a direct extension of the inflammation to the nerve, or for its compression within its confined channel. It follows that treatment should always be directed to the middle ear in these patients; and the author describes cases in which an apparently normal drum has been incised for this reason and found to contain serum or blood.

clot. He claims that in refrigeratory paralysis there is always to be obtained by diligent search some history of antecedent earache or some slight impairment of the auditory sense, and recommends paracentesis as a routine whether this is so or not. The results on the paralysis of such treatment are reported to be excellent.

AT a recent meeting of the Société de Biologie, Nicolaïdi gave an account of his researches into the physiological action of certain Solutions of Mineral Salts and Acids, and Radio-active Solutions; when injected into animals. Fluid containing phosphoric acid and glycerophosphates was found to produce an increase in the nutritive exchanges and body weight when introduced into rabbits. Similar results were obtained with progressively increasing doses of phosphoric acid injected into a dog and other rabbits. Inspired by the results of his earlier work on radio-active bodies, the author next tried the effect of using similar solutions, which he made radio-active by the method of Jaboin. A more marked increase in body weight and in the nutritive exchanges, as well as an augmentation in the number of the blood-cells, were found after employing these radio-active solutions, and no macroscopic or microscopic changes were subsequently discovered in the organs. These results induced the author to employ this form of treatment in the human subject, and in the course of a year he has performed some 700 injections with favourable results in cases of cachexia, malnutrition, and certain infectious diseases. These favourable effects would seem to have been caused by the injections modifying the nature of the "soil," and re-establishing a condition of nutritional equilibrium.

A SOMEWHAT rare complication of Mumps, yet one which has been met with several times in the course of particular epidemics, is described by Paul Roy in a recent number of *La Clinique*. At any time between the first and twelfth days of the disease, usually from the third to the sixth, the patient is attacked with severe pain in the epigastrium, accompanied by nausea and vomiting, and is occasionally found to have a palpable tender tumour in a situation corresponding to the pancreas. A careful examination will exclude the possibility of the presence of an appendicitis, gall-stones, perforated gastric ulcer, and the gastric crises of tabes. The complication is in reality an extension of the infectious process to the gland cells of the pancreas, analogous to a similar spread which occurs at times to the ovaries and testicles. It is usually met with in young adolescents, and has been noticed particularly in young soldiers. There would seem to be no connection between the severity of the attack and the onset of pancreatitis. Nor does this complication seem to have any influence on, nor to be influenced by, other complications. The cause of its incidence, as well as the origin of the pain and digestive disturbance, are obscure, but the latter are usually attributed to pancreatic congestion and irritation of the solar plexus.

PAIN is present in most of these cases, but may only be elicited by pressure. At first it is dull and deep seated, but gradually increases in severity, and may ultimately even lead to syncope. It is usually paroxysmal, and seated in the epigastrium; midway between the umbilicus and the ensiform process. It may radiate to the back or along the sides towards the floating ribs. Vomiting is usually present, and varies in intensity from simple nausea to intractable vomiting. The first vomit contains food, later is watery and bilious, and is occasionally hæmorrhagic. Constipation may be present, but diarrhoea is more common and often excessive. Jaundice, contrary to what might be expected, is very rare. Fever, which is proportional to the severity of the pancreatitis, varies from 100° to 102° F., and may last three or four days. Local and functional symptoms are very rare, palpation usually revealing no appreciable increase in size of the organ. Albuminuria is rarely present, and there is never glycosuria or steatorrhoea. The course of the complication is rapid, lasting from two to seven days. Fever is the first to disappear, then vomiting, and lastly pain, which lasts longest of all symptoms. A complete cure is the usual result, and it would seem that no permanent organic injury remains. Diagnosis may be difficult, especially when the ordinary symptoms of mumps are suppressed. Treatment is purely symptomatic, and is directed chiefly to relieving the pain and vomiting. Ice applied to the epigastrium and allowed to melt in the mouth, mixtures containing opium and cocaine and hypodermic injections of morphia are useful to this end.

IN a recent number of the *Revue de Stomatologie* attention is called by Chompret to the advantages of performing Alveolar Syndesmotomy, or section of the alveolo-dental ligaments, prior to extracting teeth. The circular ligament is divided, and, after penetrating more or less deeply into the joint itself, the fibres of the alveolo-dental ligament are severed. To effect this variously shaped slender instruments of fine temper and exceedingly sharp are necessary. The advantages claimed for this operation are the certainty with which tearing of the gum is avoided and the adherence of the tooth diminished, and the increased facility in getting a grip of the tooth with the elevator or forceps. Moreover, the shape of the roots can easily be determined, so that this preliminary operation facilitates subsequent extraction in difficult cases. The operation can be performed without pain under a local anæsthetic, and the additional time necessitated is more than counterbalanced by the resulting advantages.

AT the last meeting of the Biological Society of Paris, Dr. A. Netter referred again to the administration of Chloride of Calcium as a preventive means against cutaneous eruptions following Injections of Serum, as he does not think its efficacy in this respect is sufficiently well realised by the profession. He gives some interesting statistics to substantiate his point. In 1907 among 229

diphtheritic patients who received serum injection, and were also treated with chloride of calcium, only 7—that is, 3.1 per cent.—developed a rash, whereas of 251 diphtheritic patients who did not have the salt, 43—or 17.1 per cent.—had an eruption. During the first six months of the present year there have been five cases of a rash in 117 cases of diphtheria with chloride of calcium—that is, 4.3 per cent.—and 25 cases of a rash in 133 cases without the salt, or 18.8 per cent. The administration of chloride of calcium should commence directly the first injection of serum is made, and should continue for three or four days, or longer if the injections are repeated. The author states that the preventive action of the salt is much less efficacious for the intra-spinal injections of anti-meningococcal serum. He is unable to offer any satisfactory explanation of the action of the salt, but the statistics he furnishes favour strongly the use of the drug in these cases, and they are sufficiently large to exclude the element of chance.

MOST ingenious are the means sometimes adopted to simulate disease in order to avoid military service on the Continent. Some cases of tumours in the legs, produced by the subcutaneous injection of paraffin wax, were recently reported in these columns. The latest form of simulation for this purpose is the production of an apparent jaundice by the ingestion of picric acid in gelatin capsules. Three cases are reported from the Odessa military hospital. Thirty-centigramme doses were taken twice a week. From the third day the skin and sclerotics became saffron yellow, and the absorption of six to eight doses were sufficient to make the colour persist for more than three weeks afterwards. The surgeon, Dr. Pievnitsky, was able to arrive at a correct diagnosis from the fact that the usual attending symptoms of true jaundice were absent. The pulse was rather accelerated than slow (in one case as much as 100 per minute), the appetite and sleep were not disturbed, the fæces were of a normal colour, and there was a tendency to diarrhoea. The urine, sometimes red and sometimes blackish, contained neither biliary acids nor pigments. Treated with sulphuric acid it became rapidly decolourised, so that this condition of the urine, and especially the absence of bilirubin, were sufficient in themselves to determine the nature of the condition.

THERE are many so-called diagnostic signs of pathological conditions such as aortic insufficiency, which are by no means constant, often only appear when the condition is well-established, and are consequently of little diagnostic value, though nevertheless interesting pathological phenomena. Among such may be classed the "Circulatory Pupil" recently described by Dr. Michel Landolfi of the Naples Incurable Hospital. It appears that previously in 1903, Dr Roche of Geneva conceived the idea that in aortic insufficiency the pupil might show rhythmic variations corresponding to the cardiac pulsations, but careful examination of several

patients failed to confirm this supposition. In one case, however, it is reported that the iris showed variations synchronous with the respiration. Dr. Landolfi following up the same idea has been more successful and has actually observed this "circulatory pupil" in one case among twenty-four patients examined, all exhibiting the classic symptoms of aortic insufficiency. By the administration however of digitalis for three or four days he was able to obtain the same phenomena in three other cases. The rhythmic variations of the pupil are, of course, independent of light, the contraction of the pupil corresponding to ventricular systole dilatation to diastole. This phenomena is apparently only present in cases of pure aortic insufficiency, not complicated with aneurysm, aortic stenosis or other valvular lesions, and when there is well-marked hypertrophy of the left ventricle and a Corrigin pulse. The explanation of the phenomenon is that during systole the rush of blood causes hyperæmia of the iris and consequently myosis; during diastole the rapid return of the blood induces anæmia of the iris and so mydriasis. It will be interesting to note whether this phenomenon receives further confirmation at the hands of other observers.

THE application of the Galvanic Current in cases of Facial Neuralgia too often fails to effect a satisfactory cure or even to give any substantial relief from the affliction. Dr. V. Vitck of Prague had recourse to galvanisation in a case of severe neuralgia of the second and third branches of the Trigeminal, applying the positive pole in the usual manner at the level of the suborbital and mental foramina. Although treatment was carried out twice a day little relief was obtained, the attacks became less frequent, but of the same intensity. The idea then occurred to Dr. Vitck to place the electrode inside the mouth at the level of the suborbital foramen and also on the inner side of the inferior maxilla near the temporo-maxillary articulation where the inferior dental nerve passes at the side of the lingual before entering the dental canal. The current was applied at these points for five minutes beginning with a strength of one milliampere and gradually increasing. The effect was, according to the author surprising. At the end of three days the patient was able to eat and sleep without pain, the attacks of pain became more and more rare, and at the end of a week the neuralgia had completely disappeared. Since then Dr. Vitck has had the same success in two other similar cases, and he explains these good results by the fact that in this way the current comes into closer contact with the affected nerves. He has had a special electrode constructed for the purpose, consisting of a long handle insulated with hardened gutta percha and terminating in a sort of short, slightly curved spatula. Dr. Vitck has also successfully treated a case of supra-orbital neuralgia by placing the electrode under the eyelid in the position of the supra-orbital foramen. Care must be taken to only use a very weak current (0.5 milliampere at the most), and not to leave the electrode in contact with the conjunctiva for more than a minute at a time.

HOSPITAL CLINICS.

THE FEEBLE-MINDED AND THEIR CARE.

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(Abstract of a lecture delivered at the Medical Graduates' College and Polyclinic.)

I FEEL that the subject of my lecture to-day is both a medical and a social one, and that it is of the greatest importance. No doubt a good many, perhaps all, of you have seen the report, in eight large volumes, of the Commission on the Feeble-Minded, which has recently sat. The summary of the whole, which occupies the eighth volume, is especially important; and I am myself particularly interested in it because I was asked to contribute an analysis of it to the *Quarterly Review*.

The Commissioners begin by accepting the definition of the Royal College of Physicians, according to which a feeble-minded person is one who is capable of earning a living under certain favourable circumstances, but is incapable by reason of mental defect of managing his affairs with ordinary prudence. I must point out here the all-importance of early recognition of the disorder, and of long-continued treatment. Control and treatment must be kept up as long as is needed. One of our great difficulties is that when the insane reach the level of reason they are discharged as cured, and so get beyond the reach of treatment just when it ought to be persevered with. One might just as well argue that when the sufferer from typhoid fever reaches a normal temperature he is then and there fit to get up and go about his business. The feeble-minded should not be returned to the stress of the world until it is certain that they are really fit to hold their own in it.

It is, further, to be desired that the care and control of the feeble-minded should fall under one authority and one only. This is, perhaps, a counsel of perfection at present. We are hardly advanced enough socialistically—or possibly one ought to say autocatically—to put on one side everyone who is not perfectly sane. For, first of all, it is to be considered exactly who the feeble-minded are. Every person above the grade of idiot or imbecile up to those who are nearly normal is classed as being feeble-minded. Certain of these ought decidedly to be put on one side—the inebriates, the criminals, those with immoral tendencies—and their control and treatment ought to be continued as long as it is needed, which in the case of the inebriate is generally for life. Also the epileptics must as a class be said to be feeble-minded, and they too must be included in the scheme. It is a great point to prevent these types from propagating. Yesterday, when I was preparing this lecture, I could not help noticing in front of me an advertisement of a book from Cambridge on the evolution of the vertebrates, and, naturally enough, I began to think of the evolution of the invertebrates, these backboneless people whom it is of the utmost importance to segregate.

From a medico-legal standpoint the first consideration that arises is that these patients are not

certifiably insane. In filling in the present insanity certificates one has to put in symptoms observed by oneself; and in the majority of the feeble-minded there is nothing that can be put down on a certificate as a symptom of insanity observed by oneself. When the feeble-minded are properly cared for, some form of certificate may be obtainable which will cover these cases, but at present no certificate of insanity can be given.

There are two main divisions of the feeble-minded: the intellectually weak who are weak all round, are often backward as children, and are permanently affected throughout life; and those whose defect is more an inability to direct and co-ordinate such intellect as they possess. Already large provision is being made for the education of the physically crippled: Lord Mayors take up the matter and found homes for them; but for the morally defective very little provision is made other than in prisons and reformatories. Then there is the large group of those who are often called "wasters," and are allowed to run at large. It is not uncommon for me to be consulted about some young man whose grandfather and father may have piled up a huge fortune in business, but who is himself chiefly engaged in scattering the heap. This of itself would not matter did not injury to others too often accompany the process. The waster is a cause of harm and damage to others, but how we are going to secure him individually I hardly know.

The same is true of inebriates. It is perfectly certain that some inebriates can never be cured, do what one will, and ought to be put on one side. As for epileptics, there are, of course, epileptics and epileptics. It has been said that certain great geniuses, such as Napoleon and Mohammed, have been epileptics, and there is no doubt that some of the occasional or casual epileptics are brilliant men, to put aside whom would be very unjust. But those epileptics who are constantly subject to the disorder should be prevented from having offspring.

Among the difficulties of the question, there is the disposal of a large group of those who come into the world handicapped, and never get strong; they are often subject as children to fits or rages on very slight provocation. Others get as far as adolescence or maturity before they break down and become weak-minded. They are like eight-day clocks, which can only be wound up to go for a certain space of time and no longer.

Another point which the Committee seems to have hardly grasped is that if we seclude all those who are likely to add to the insane population if they marry, there are to be considered those who after a mental breakdown may recover and remain well for one, two, three, four or more years, but who will, it is perfectly certain, ultimately break

down again. These patients are perfectly reasonable during the intervals, and they cannot be considered as being permanently weak-minded.

Not only is direct heredity from acute insanity in the parent dangerous; this danger is comparatively slight beside the prospect of an epileptic or weak-minded person having defective offspring. Not every acute lunatic begets children who are mentally deficient. It is well to remember that there is a much greater danger of transmission of apparently slight deviations from the normal. This is strictly in accordance with the principles of Darwin. The degenerating or epileptic father is more likely to beget feeble-minded children than is even he who has been acutely insane. So, too, the child begotten by a general paralytic stands a very great chance of being permanently weak-minded or insane. The effect of a tuberculous parentage is not quite the same: but it stands to reason that the child of anyone whose general health is seriously impaired by tuberculosis is not likely to be robust, and may be defective mentally as well as bodily.

The question is often asked: Is simple consanguinity likely to produce feeble-mindedness? Usually it is in connection with the marriage of cousins that this is put. The parents are, as a rule, dead against such marriages. Now, the truth of the matter is that if, there is neurosis or actual insanity in either family, it is a serious matter, and marriage should be forbidden. But apart from that, simple consanguinity is of itself of much less importance in the production of mental deficiency than is generally supposed.

The feeble-minded are often described as being easily led, as wanting in will-power and in adaptability. Anything of the nature of epilepsy is often thus represented in the next generation. A neurotic child, too, who might otherwise develop all right, may suffer from some physical disorder in childhood, and may then be affected by some degree of feeble-mindedness. A series of convulsions or a febrile attack of any kind may act in this way. The frequency with which interference with respiration causes mental enfeeblement is very interesting to me; measles and whooping-cough may act thus. There is also no doubt that certain individuals owe their feeble-mindedness to drugs or to injuries; of the former especially to opiates and to gin administered to produce sleep. I see not uncommonly young giants, boys of 15 or so, who stand 6 ft. 3 in. or 6 ft. 4 in., and have outgrown their nervous systems. Unfortunately, the majority of these never recover completely.

Let us take an example of the first class into which I divided the feeble-minded, those who are intellectually weak all round. A child is born apparently healthy, and all goes well until it is about 18 months old, when the mother notices that the baby neither walks nor talks. Another six or 12 months may go, and the child then begins to totter about, though it is often able to crawl actively at the usual age, but still it does not talk; it may not begin to do this until it is three or four years old. These are the most important cases of defective development likely to end in permanent

feeble-mindedness. Such children are very subject to rages; little things upset their balance; night terrors are not infrequent, and wetting of the bed is common. They are, in fact, long in being taught the ordinary conventions of society. Yet these children are usually looked upon by their friends as merely backward. They may in time learn a certain amount of truth and honesty, and even master some book learning. I am told sometimes about a child which has not learned to walk until four years old that it is very musical. I ask then precisely what the phrase means, and I generally find out that the child can at once reproduce by humming any tune it hears; but it cannot be taught to play. Such children can reproduce music, but cannot develop. I can visualise while I am talking to you an individual whom I have long watched. At about 14 he was apprenticed to a tailor, and after three years of this he was sent to another situation as an improver. But at the end of 24 hours he was sent home, for it turned out that he was unable to do anything beyond sewing. He was then set to bootmaking, but could never learn anything beyond hammering in a nail. Then it was thought he might best be used running errands, but here too he was useless. Yet he was a nice bright boy, and perfectly willing; but he could be made no use of whatever at anything. I saw a young woman once who was coming into a large property, and was brought to me for an opinion about her fitness to look after it. When I first saw her I thought how very sensible she seemed, and that it was rather a shame to subject her to the stigma of being thought weak-minded. At my request she read some French out of a book, and conversed with me; but on asking her to do some sums she failed utterly. She could not add two and two, or count up a handful of money.

There are very many of these individuals who are at liberty, especially in villages, where they pass muster as "softies." But this class, if allowed to breed, will breed weak-mindedness to a certainty. If these patients can be put to agricultural work, well and good. At one time they were sent into the army or navy, and there is no doubt that the strict discipline and regular life keeps them out of mischief. The establishment of colonies for these folks was considered by the Royal Commission. Now, colonies are all very well, but I have seen another side of the matter. The establishment of such colonies damages property in the neighbourhood. The oldest of all such colonies is at Gheel, in Belgium, the city of the simple; there for 700 or 800 years have been sent the failures from the country round about, and there is there a central receiving depot controlling 15 or 16 villages for the feeble-minded.

A certain number are greatly benefited by religious institutions. A well-conducted convent is often a good place for those easily led people who so often drift into immorality but for some such restraint. The Church Army and other religious institutions do work of the same sort. The whole future of the treatment of the feeble-minded depends on the development of such assistance as institutions and colonies; but success is usually only partial.

Moral defects are much more difficult to deal with. Honesty is a thing that does not come naturally to a child. It has to be taught, and it is a slow acquisition for the infant to discover that everything that can be touched does not belong to it. Nowadays we send the young thief to an institution where he is kept under strict discipline, and a certain number are thus reformed. One does not want punishment to be revenge, but equally it is not desirable that the criminal should feel he is not responsible for his offence. Sexual morality is very much wanting in the feeble-minded. At any of the homes you will find that a large number of the women are the mothers of illegitimate children. Thieves one must punish to a certain extent; but as far as moral defects are concerned segregation is the only way. I was very much astonished to find that in democratic America there is a strong feeling among experts that the man who is convicted three or four times should be imprisoned for life. Certainly public opinion here would not sanction such a proposal.

For inebriates retreats are very useful. There are brands plucked from the burning in all sorts of ways—by drugs, by the Salvation Army, certainly by hypnotism, and by retreats. But we have hardly yet got so far as to seclude all habitual drunkards. Some dipsomaniacs are wonderful men, who it would be a great pity to put away altogether.

Constant occupation is necessary in the education of weak-minded children. Music, drill, games, gymnastics, and a simple outdoor life as far as possible are all important. As long as children are under age one can do what one likes with them;

the difficulty is what to make of them as they grow up. Various avocations have been suggested. The present rage is for poultry farming and fruit farming; but there is a limit to both of these, and it must always be remembered that the feeble-minded is one who cannot *unaided* make his own living.

Of the next group, the epileptics, I must speak very shortly. There are now several epileptic school colonies, some of which contain several hundred children who are neither imbecile nor idiotic. These are to a certain extent educable, but will never be more than feeble-minded. First of all they live in houses of only one story, so there are no stairs for them to fall down. Then there are no ponds, railways, or other possible sources of accidents. Their diet is almost purely vegetarian, and they, of course, get no stimulants. They have object lessons, singing, musical drill, and simple teaching of that sort, with a certain amount of bromides, but not much—much less, as a rule, than they have been accustomed to take before joining the colony. Such children thus treated improve in a remarkable way, but they never become normal. They work perfectly well at carpentering or laundry work, etc., as long as they are watched. This group is a very unfortunate one, for when they leave at 16 or so they drift ultimately into workhouses, as they are not fit to be in the charge of their relatives.

One hesitates to condemn every feeble-minded child as feeble-minded for life, because undoubtedly some of them do become normal. But these are very few; the majority never do so. The essential thing for them all is early recognition and early treatment.

SPECIAL ARTICLE.

TROPICAL ABSCESS OF THE LIVER.

TROPICAL abscess of the liver is not less interesting from the point of view of its pathology, than it is from the point of view of its successful treatment, and particularly at the present time when a new method of treatment, founded on a sound, pathological basis, is slowly but surely making headway.

The causation of liver abscess is pretty generally held to be the activity of that particular variety of *amœba coli* which is so constantly found to be associated with the form of dysentery met with in the Tropics. This does not necessarily imply that an individual must have had an acute attack of dysentery previous to acquiring his hepatic condition, but it is probable that in nearly every case there must have been some dysentery; enough, at all events, to give the *amœba* a *raison d'être* for its continued presence in the intestine. How the *amœbæ* reach the liver is not so certain, whether via the lymphatics or the portal blood-stream. In all probability it is by the latter, and once having reached the finer ramifications of the portal vein, they settle there and produce inflammation of the liver parenchyma.

The onset of liver abscess is often so insidious that it is sometimes said that it may arise in very

much the same way as the "cold" abscesses of tuberculous origin, without any acute inflammation of the liver having preceded its formation. It is not impossible that in these cases the preliminary hepatitis has been confined to the more central parts of the liver, and that consequently—just as in the case of a central pneumonia—the symptoms are atypical and misleading, owing to the fact that the serous coverings of the organ are not involved in the inflammation. The subsequent development of an abscess in a case of this sort may then come as a complete surprise to both doctor and patient, localising symptoms never having been definite enough to attract attention to the liver.

From a clinical point of view, these cases vary so much that it would be possible to arrange them in a large number of classes, each distinguished from its fellows by the presence or absence, or the greater prominence of some particular symptom. But such a division would be quite artificial, for while there are, on the one hand, the very acute fulminating cases where the onset is characterised by acute pain and tenderness over the liver, high temperature, quick pulse, vomiting and rigidity of abdominal walls; and, on the other hand, slow insidious cases—characterised by no acute symptoms,

and ending, perhaps, in the formation of an enormous abscess for which the patient seeks relief owing to "shortness of breath!" There is between these two extremes every type of case. In fact, it is probable that only in the case of appendicitis have we a disease so protean in its manifestations and symptomatology as is liver abscess. Sometimes the abscesses are multiple, but fortunately they are usually single, or have become so before surgical intervention takes place. It is probable that, if many abscesses are present another element of infection is present, and that portal pyæmia of staphylococcal or coli origin has occurred.

In considering some of the clinical aspects of the disease, it is naturally the more chronic cases which will particularly interest those in England, for the fulminating type of abscess is not often met with outside the tropics. They may be very easy of diagnosis, but, on the other hand, they are often very difficult. The patients turn up sometimes after a residence in England of many months or even years, complaining of loss of appetite, emaciation, want of energy and general malaise; and that is all. There is not a word about the liver! There may be a muddy brown complexion which to the experienced is a very valuable indication, and there may be a history of profuse sweats, and perhaps an evening rise of temperature to 99.5 or 100.

When examination of the hepatic region is carried out, the typical dome-shaped area of dullness so frequently described is often absent; perhaps the lower margin of the liver is only just palpable, and the dullness extends but one rib higher than normal. What is one to do in such a case? Is it a case of abscess, or is it merely chronic hepatitis of malarial or alcoholic origin? It is here that skiagraphy has proved so useful. An x-ray photograph will not reveal an abscess by any difference in the density of the shadow, but it will at once show up any abnormal bulging, or other irregularity, in the outline of the liver. And it must be obvious that a considerable localised bulging might be possible in various directions without giving rise to any material alteration in the liver dullness, and without being apparent to ordinary palpation.

The last step in diagnosis is to thrust an exploring needle into the liver and actually demonstrate the presence of pus. But it is necessary to remember several important points in connection with this relatively simple procedure. In the first place it is well never to delay making an exploratory puncture, for even if no pus is found no harm is done. But when the puncture is made the patient must be anaesthetised and the surgeon prepared, so that in case pus is found, it may at once be further dealt with according to the method it has been decided to use. And finally, in using an exploring needle in the liver, just as in the brain, the needle must never be moved laterally, but must be taken out and re-inserted if the first exploration is unsuccessful.

The actual treatment of abscess has for many years been on the great surgical principle that all abscesses, whatever their nature or situation, should be freely opened and drained. And this method of treatment often gives good results; but, on the

other hand, it frequently happens that the result is not so happy. In the first place the patients are often so pulled down as hardly to be in a condition to stand the really extensive operation involved in resecting portions of one or more ribs, and opening the liver; secondly, liver tissue is unsatisfactory material to cut into; and, thirdly, the pus in these abscesses is of such a character that no known dressing will absorb it, with the result that it runs down the chest wall under the dressings, and most of it finds its way into the bed.

The pus of a liver abscess is peculiar in many ways; thick, viscid, and the colour of anchovy sauce, its very appearance is unlike anything else. It is peculiar also from the fact that, as regards ordinary organisms it is quite sterile both in films and cultures. If, however, a hanging drop preparation be examined on a warm stage, the amœba coli may be recognised, pushing out their pseudopodia.

It appears to be certain that the pus is the result of the activity of these protozoal organisms, and of them alone. Acting on this assumption Captain L. Rogers, of the I.M.S., conceived the possibility of destroying the amœba *in situ* by the injection of a fluid destructive to protozoa, and he suggested for this purpose a solution of quinine, which is so highly poisonous to other forms of protozoa, as, for instance, spermatozoa or the organisms of malaria.

His suggestions have been adopted and the method has been followed by brilliant results. The procedure is as follows:—The patient is prepared and anaesthetised in the usual way, and an exploring needle is thrust through the eighth or ninth interspace. A sudden loss of resistance will usually indicate when the abscess has been reached, but if this is not the case, the needle must be pushed in three or four inches, and then an aspirating bottle is attached and the needle slowly withdrawn. It is important to use a large needle in view of the thick and viscid consistency of the pus, and it is wise to use not too great a vacuum pressure in order to diminish hæmorrhage. When the pus has been struck it is slowly aspirated away until the abscess cavity appears to be empty, great care being taken that in the manipulation of the needle the point is not withdrawn from the cavity. This may easily happen, and there is no other indication of its occurrence than the cessation of the pus flow, which will probably be ascribed to the complete emptying of the abscess sac.

The next proceeding is to replace the pus by a quantity of 1 per cent. solution of bichloride of quinine; a tube and funnel are attached to the needle and the solution is allowed to gravitate in, with the funnel held about three feet above the level of the patient. Opinions differ as to the quantity of solution which is to be allowed to run in. Some hold that a quantity equal to the amount of pus removed should be used; but this is probably excessive, for there can be no doubt that the abscess cavity undergoes considerable diminution in size directly the pus is abstracted, and further the vacuum created will necessarily be followed by a certain amount of bleeding, which will tend to fill the cavity. It is probably sound practice to allow

as much solution to enter as can be got to do so with a pressure of about two feet, and only to use greater pressure until an amount equivalent to half the pus abstracted has run in. The patient quickly recovers, and usually expresses himself as much relieved, but some pain in the upper part of the abdomen may be complained of for a few hours after the operation. This is in all probability due to the escape of a few drops of quinine solution into the peritoneum.

Almost immediately after the operation the temperature falls to normal, the colour rapidly improves and the leucocytosis drops several thousands, and in some cases the patient will get gradually but completely well. Often, however, the pus collects again, and if this is the case, on the third or fourth day the temperature will rise, the leucocyte count will increase and the pigmentation of the skin will return; the patient will at the same time lose his appetite and begin to have restless nights again. Aspiration and injection should now be carried out again without delay, and if necessary even a third or fourth time. On each occasion it will be found that the quantity of pus has diminished. Thus in one case, at the first operation there were 57 oz., at the second 30 oz., and at the third and last 20 oz., the patient then getting completely well.

It is probable that in the case of these very large abscesses one operation is never sufficient, and there may be other factors which are of importance in determining the ultimate fate of the case. For instance, in another case, after five aspirations, the quantity of pus withdrawn each time had diminished from 20 to 5 oz., but still it re-collected. The patient was therefore subjected to the ordinary operation, when it was found that the abscess was so superficial that the chest wall practically constituted its outer boundary.

As it is obvious that complete cure of this condition can only be brought about by collapse of the abscess cavity, the major operation was necessary here in order to allow the outer wall of the abscess to fall in. But even if these cases have ultimately to undergo a resection of rib, by the time this is carried out, the general state of the patient and the local condition of the abscess have been so improved by the injections, that recovery is rapid and uneventful.

It appears, therefore, that by this method of injection we have a means of treating tropical abscess of the liver of so simple and straightforward a nature that it can be utilised in such places and under such conditions as might render the older operation one of extreme difficulty and danger.

MEDICINE.

ASCITES—IX.

THE DIFFERENTIAL DIAGNOSIS OF THE CAUSE OF ASCITES (*concluded*).

Ascites due to heart failure from chronic lung disease or from chronic valvular or muscular heart disease is usually preceded by swelling and œdema of the feet and legs. A careful examination of the heart and lungs, and the detection of signs of valvular disease of the heart, or of chronic bronchitis and emphysema or of fibroid lung would account in a satisfactory manner for the presence of ascites. The clinical picture of chronic heart failure is ultimately so similar, no matter whether the primary cause is renal, pulmonary, or cardiac; that it is often extremely difficult to allocate the failure to its right cause. Two points should receive particular attention in all such cases, namely, the condition of the retinae and the microscopical character of the urinary deposit.

It should be remembered that any condition of chronic failure of cardiac compensation may produce enlargement of the liver from passive congestion—a “nutmegged” liver. The enlargement may be considerable. The edge of the liver is usually sharp, firm, and well defined; it may reach to the level of the umbilicus in the right nipple line, or even extend below it. The hepatic surface is firm rather than hard, and quite smooth. It will be tender or not tender according as the enlargement from heart failure has occurred rapidly and recently or the reverse. In some cases the viscus may be felt pulsating. In all such cases the urine is concentrated, scanty, high coloured, of high specific gravity, and nearly always albuminous, with but few casts.

Bright's Disease.—As we have pointed out, Bright's disease may give rise to ascites in at least four entirely different ways, namely: (a) as part of general anasarca, (b) as the result of acute “simple” peritonitis, (c) as the result of chronic “simple” peritonitis, with or without perihepatitis, (d) as the result of backward pressure from failing compensation in a dilated hypertrophied heart.

(a) In acute Bright's disease ascites may occur as a part of general anasarca. The feet, legs, scrotum, body, loins, and face may all be swollen and œdematous, and there may be signs of fluid in the pleural and pericardial cavities at the same time. The urine is diminished in total quantity, its specific gravity is high, it may contain a large quantity of blood and albumen, and microscopically it abounds in renal epithelial cells, blood corpuscles, and all kinds of tube casts. In chronic tubal nephritis ascites may also be associated with general anasarca. The patient is usually very anæmic, and the urine may be pale, of lower specific gravity than normal, with abundance of albumen, little or no blood, many hyaline and granular tube casts, but not so many renal epithelial cells and epithelial and blood casts as in the acuter phases of the malady.

(b) and (c) Acute and chronic peritonitis and perihepatitis as causes of ascites, and their relations to Bright's disease, have already been alluded to.

(d) Ascites the result of backward pressure following dilatation of the hypertrophied heart that results from chronic renal fibrosis may be extremely difficult

to distinguish from ascites caused by primary disease of the heart or by certain chronic pulmonary complaints. The abundant pale urine of low specific gravity with a trace of albumen, characteristic of granular kidney, becomes changed by heart failure into a scanty urine of high specific gravity, and the albumen in it may become as abundant as it is in acute nephritis. One relies less, perhaps, upon the urine here than upon the condition of the radial artery as to its thickness and tortuosity, the presence of retinal hæmorrhages or the white patches of albumin-uric retinitis, a history of the need to rise more than once at night to micturate although the prostate is normal, or a history of such predisposing causes as chronic alcoholism, high living, gout, or plumbism. The family history is often of considerable assistance also, for arteriosclerosis, granular kidney, and cerebral hæmorrhage all have a tendency to run in families.

Ascites, the result most probably of a very mild form of chronic peritonitis, is liable to occur in cases of *splenomedullary leuchæmia*, *lymphatic leuchæmia*, *Hodgkin's disease*, *splenic anæmia*, and to a less extent in *pernicious anæmia*. In the first four of these five conditions the spleen is likely to be enlarged, and in none of the five is a blood examination likely to be omitted. The condition of the blood itself is pathognomonic in the cases of the two forms of leuchæmia, and in pernicious anæmia. Hodgkin's disease and splenic anæmia will still remain as possibilities if the blood counts are negative, the former being indicated with considerable probability if there are big masses of discrete lymphatic glands to be felt in the neck, axillæ, or groins; whilst splenic anæmia must always remain a difficult diagnosis, made only when every other cause of splenic enlargement has been excluded, and even then often turning out to be

only an early stage of cirrhosis of the liver, i.e. Banti's disease.

Ascites may follow the rupture of an *ovarian cyst*, or it may be associated with papilloma of the ovary, when there are secondary papillomatous growths in the peritoneum. Ovarian cyst and ascites may therefore coincide with one another. A few years ago a familiar figure in the medical wards at Guy's Hospital (Pye Smith, *Path. Soc. Trans.* xlv) was a woman, about forty years of age, who, towards the end, used to come in several times a month to have her abdomen tapped. Between September 20th, 1884, and April 24, 1893, paracentesis abdominis was performed 299 times. Occasionally the patient used to let out the fluid herself by inserting a knitting-needle into one of the healed punctures which had been made by the trochar and cannula. At the post-mortem examination two large cauliflower-like masses of papillomatous growths were found sprouting from each ovary, and there were a number of secondary growths which were confined chiefly to the parietal peritoneum and to the peritoneum covering the liver, stomach, and spleen. The ascitic fluid in this case was usually clear, straw-coloured, of specific gravity varying between 1.015 and 1.025, and microscopically it contained large round epithelioid cells and club-shaped villi covered with cylindrical epithelium. There were no distant metastases, and clearly the growths were not very malignant. It has, indeed, been stated that if the ovarian papillomata are themselves removed in cases of this sort there is no need to touch those that are scattered over the peritoneum, because these will disappear spontaneously after the primary masses are gone, and the ascites will cease to recur. The importance of correct diagnosis and treatment in such a case is obviously very great.

"IDIOPATHIC" HÆMATOPORPHYRINURIA.

It is well enough known that Hæmatoporphyria is one of the grave symptoms that may result from the administration to patients of drugs such as trional, sulphonal, or tetronal. It is less well known, perhaps, that there are other patients in whom a precisely similar condition may arise without any apparent cause. These seemingly "idiopathic" cases are possibly associated with some decided anomaly in the hepatic functions. Whatever their pathology, they are serious enough; for although some recover, and others survive for a long time with recurrences of the complaint at intervals, some prove rapidly fatal, as in the following instance recorded by Dr. Parsons in Ireland.

The patient came under observation early one June, suffering from diffuse abdominal pain, vomiting, and constipation. The urine, on standing, became of a deep port-wine colour, but although intense hæmaturia at first suggested itself, neither albumen nor blood was present. Spectroscopically, hæmatoporphyrin was detected; although, as in almost all these cases, the colouration of the urine was only in part due to this, some other pigment, as yet unidentified, being present in far larger quantities than the

hæmatoporphyrin itself. Neither sulphonal nor trional had been administered, and no cause for the hæmatoporphyria could be made out. After ten days the patient's condition was so much improved that she was sent away for a change of air. The trouble recurred, however, almost at once, and she was again seen at the end of June. Abdominal pain and sleeplessness were prominent symptoms, and the urine again developed the same colour as it had done in the first attack.

Towards the end of the first week after re-admission to hospital the patient complained of severe pain in her feet. On July 7 her arms were found to be almost powerless, and the woman was so ill and feeble that she could barely move in bed. On July 10 incontinence of fæces developed. A few days later, swallowing became difficult, and death took place in a little over two weeks from the re-admission to hospital and in less than seven weeks from the first onset of symptoms.

In addition to its port-wine colour, another remarkable feature of the urine was that it showed little or no tendency to decompose, even when kept for more than a year.

SURGERY.

A CASE OF INTESTINAL OBSTRUCTION WITH UNUSUAL FEATURES.

THE treatment of appendicitis has been discussed so thoroughly during recent years that the subject has become a hackneyed one: and the majority of surgeons are now in agreement that an operation is necessary as soon as the symptoms of an acute attack have declared themselves. In saying this the writer refers to those cases in which the appendix is obviously acutely inflamed, and peritonitis or abscess formation has supervened. He is not concerned with the debated question as to whether a catarrhal attack should be allowed to subside and the appendix removed subsequently in the quiescent stage or an immediate operation should be performed.

Nevertheless one occasionally comes across cases in which the patient has recovered from a definitely acute attack of appendicitis with abscess, in which no operation has been performed, either deliberately or because the circumstances did not permit of a laparotomy being done, *e.g.* the sudden onset of an attack of acute appendicitis in a remote part of the country where there are no facilities for abdominal surgery.

The result is usually fatal, but the patients sometimes recover spontaneously; and such cases might be used as an argument in favour of expectant treatment, if one did not have the opportunity from time to time of following the after history of these patients. The case about to be described is an illustration of this. The patient, a stonemason, aged 54, presented himself with symptoms of intestinal obstruction.

The history he gave was as follows: In January of the present year he was taken ill with sudden acute abdominal pain, referred at first to the umbilicus, and after a few days to the right iliac fossa. He was put to bed and treated by a doctor, who told him he was suffering from appendicitis. He was treated with purges and the application of turpentine stupes to the abdomen. He was also given subcutaneous injections of morphia to diminish his pain. He was exceedingly ill, and for some days his life was despaired of, but eventually he began to recover, and in a fortnight he was considered to be out of danger. His doctor was not communicated with, and no information could be obtained as to his exact state at this time, *i.e.* what was his condition on abdominal examination. His convalescence was long and tedious, and he was kept in bed until the end of April. During this time great difficulty was experienced in getting his bowels to act, and an evacuation was only obtained in response to calomel or castor oil.

He gradually recovered strength after getting up, but the difficulty with the bowels persisted, and he had occasional attacks of vomiting accompanied by abdominal distension. He exercised great care in the choice of his diet, but in spite of this he became suddenly worse on July 16, and from this date his constipation became absolute. The vomiting, which had been up till now occasional, became constant, and was made worse by any attempt to take food, which

caused a sensation of "being blown up inside." The last material vomited before he was seen "smelt like a motion."

On examination he was an emaciated but not cachectic looking man, in obvious distress. His temperature was 96° F., and his pulse 120. He complained of great pain just below the umbilicus. The abdomen was distended, but not excessively so. The movements of the abdominal wall on respiration were limited: but this appeared to be rather a mechanical result of the distension than due to inflammation of the parietal peritoneum. There was no tenderness on palpation, but a general sense of resistance on the right iliac fossa. No mass was felt. The distension was of the small intestine pattern, *i.e.* the centre of the abdomen was prominent and resonant on percussion, but the flanks were not distended. Nothing abnormal was felt on digital examination of the rectum. Apart from the attack of appendicitis he had had no other abdominal illness, and there was no family history of carcinoma.

Immediate operation was decided upon. The patient was anaesthetised. He was first examined with the sigmoidoscope to exclude disease of the sigmoid. None was found. The abdomen was then opened by a vertical incision through the right rectus muscle, the centre of the incision being one inch below the umbilicus. Distended small intestine at once presented. It was seen to lead down to the right iliac fossa, where a portion of collapsed small gut was seen. A puncture was made in the distended small gut and the intestinal contents allowed to escape. The puncture was sewn up with Lembert sutures. In the neighbourhood of the caecum the intestines were matted together in a dense mass of adhesions, some of which were as large as a man's thumb. These were ligatured and divided one by one and the small intestine gradually straightened out. No point of acute strangulation was found. The caecum itself was firmly bound down to the posterior abdominal wall. The appendix was felt in the adhesions but could not be freed. The wound was sewn up, but the patient never rallied, and died six hours after the operation.

An autopsy was performed, and revealed further extensive adhesions in the pelvis, which were binding the sigmoid and rectum to the bladder. No evidence of carcinoma was found. It appeared that the patient must have had an enormous appendix abscess which had been entirely absorbed spontaneously.

The case was of more than usual interest in showing how large an abscess can be absorbed by natural processes, if the resistance of the peritoneum to infection by the bacillus coli is not impaired. At the same time it must be supposed that the appendix abscess was directly responsible for the patient's death. It is also presumable that if a free exit had originally been given to the pus by operation, the dense adhesions, which subsequently caused the intestinal obstruction, would not have formed, and so the patient's life might have been saved.

DISEASES OF CHILDREN.

TEETHING AS A CAUSE OF FEVER.

In the good old days teething was a useful explanation for many of the minor febrile attacks in infants, to which the medical attendant was indisposed to give a more definite diagnosis. In these iconoclastic times the tendency is towards another extreme, and it is by no means infrequent to meet with rational physicians who boldly assert that teething is a physiological process, and will not give rise to fever, except in the presence of some other pathological state. No doubt the true position lies more or less midway between these two extremes. We may grant that the process is physiological, but so are many others in which temporary or more serious disturbances occur. Menstruation, pregnancy and lactation are equally physiological, and are admitted to be at times deranged and the source of illness. Nevertheless it is important to be on one's guard in the case of febrile attacks in an infant who is teething. I have known such attacks to be diagnosed as the result of teething, although really due to gastro-enteric disturbance, paratyphoid and paracolon infections, acute anterior poliomyelitis, acute pyelitis and other causes.

An interesting case illustrative of some of these points was that of a healthy, well-nourished baby of the upper class, aged 16 months. She had already cut eight incisor teeth and two molars on the left side of her mouth, without any trouble of consequence. On June 19 she was distinctly feverish, ailing and fretful. Her temperature was 102° F., and nothing could be found to explain the attack except that she was cutting the two right molars. It could not be strictly maintained that there was any abnormal state of the mouth, nor were the gums unduly congested, tender or painful. The temperature jumped up and down, sometimes normal for a few hours and then running up again, or not quite falling to normal. On June 21, in the afternoon, the temperature rose to 104° F. Next day the upper molar had just penetrated the gum, and the temperature never rose to more than 100° F. On the following day it was normal, and the child apparently convalescent. In view, however, of the rapid approach of the lower tooth to the surface, the mother was warned that the fever would very probably return in a day or two. On June 25 the temperature rose to 101° F., and next day to 104° F. It ran the same kind of irregular course as before, and not until July 1 was there any evidence of anything further the matter with the child. On examining the mouth that day the gum over the erupting molar was distinctly a yellowish white, and its appearance had made the mother and nurse assume that the tooth was cut. On gently squeezing the gum one drop of quite sweet pus was obtained. It really seemed as if it were due to the necrosis of the superjacent cells of the mucous membrane. Naturally, with the evacuation of this, one expected the child was at the end of its trouble and that the temperature would fall. Next afternoon it was 104° F., and the lymph node at the right angle of the jaw was distinctly enlarged and tender. Here

no doubt was the explanation of the further rise in temperature, namely, some slight septic absorption from the gum overlying the erupting tooth. The fever subsided in another two days and the child rapidly recovered. During the whole of this period of three weeks the amount of food taken was remarkably small, but the child wasted very little. Sleep was somewhat restless when there was much fever, but at other times was reasonably good. Beyond fretfulness and irritability there were no special nervous symptoms, and throughout there was no gastrointestinal derangement. This was probably due to the fact that neither the nurse nor the doctor were anxious to press food on an unwilling and feverish infant. Most of the gastro-enteric troubles put down to teething are merely the result of over-feeding a feverish child, when its appetite is bad and the secretion of digestive juices limited or totally in abeyance.

It seems pretty obvious in the above case that the primary attack of fever was simply and entirely the result of teething, through setting up a slight local inflammatory reaction in the gum. Possibly the child was one of those who are liable to considerable fever on slight provocation, but it is rather remarkable that she had cut her previous teeth without definite trouble. She presented no sign or symptom of rickets. The subsequent fever may be said to have also been directly caused by the inflammatory process set up; in this case of sufficient severity actually to lead to the formation of pus, and sepsis for a day or two. The case may be taken as supporting both views of the effect of teething.

The treatment of these patients is a matter of much importance. Undoubtedly it is good policy not to adopt unduly active measures. Lancing the gums may do good by the local bleeding, but it certainly does not help in causing eruption of the tooth. No special antipyretic measures are needed, for the temperature rarely remains persistently high. The fever is merely a symptom and does little harm. The nurse should be instructed to keep the child lightly clad, the room well ventilated, and to give a warm bath or tepid sponging if the child is very restless and unable to sleep. On account of the liability to convulsions, it is generally advisable to prescribe a few grains of bromide, say ij-v. , in one drachm of syr. *mori*, *t.d.s.*, and to give *hyd. c. cret gr. 1/3-j.* every night or on alternate nights. Here, again, one may mention the tendency of some doctors to speak of "the inevitable" grey powder. No doubt it is often given unnecessarily, but in my experience it never does harm in the doses here mentioned, and it is often followed by improvement. Certainly it cannot be regarded as the acme of good treatment to merely pay daily visits and watch the course of events. The parents are hardly likely to be satisfied, and though the doctor may be content that he is doing no harm, he must also realise that he is doing no good, and might as well wait until he is sent for to treat the convulsions or bowel derangement which may complicate the case.

PUBLIC HEALTH AND HYGIENE.

EXPERIENCES OF A SCHOOL MEDICAL OFFICER.

(FROM A CORRESPONDENT.)

IN the last twelve months a new sphere in school work has been found for the junior ranks of the profession. At present provision is made only for "inspection" of children; but the inevitable and only reasonable sequel is some form of treatment which will mean the employment of still more men in this service. In all parts of the country experience on this matter is identical. Parents practically ignore the recommendations of the medical officers. Indeed, if from those who do receive attention those obtaining it in hospital were deducted, the remainder would probably be a decimal point per cent. Compulsion would be impossible, and, indeed, since the introduction of the Education Act, "must" has always meant "rates" in the end. We may conclude, therefore, that treatment at the expense of the rates, and, possibly, the national exchequer, is inevitable. Men meditating entering on this work, then, may be glad to hear how those first in the field have fared.

Though it is frequently said that this work is for recent graduates the remark is not strictly true, as some special training after qualification is a *sine qua non*. A man must have held a residency in a children's hospital or isolation hospital, or both; he must have had experience in at least one of the specialities—eyes, nose, and throat, etc.; and now it is becoming more and more evident that the possession of the D.P.H. is almost essential. School work is really a branch of preventive medicine, and it cannot be divorced from it. It should be controlled from the medical officer of health's office, and this is the view the Board of Education now takes. Bearing this in mind, it is obvious that two or three years at least must pass before the newly qualified man can reasonably hope to get a good school appointment. But a good school appointment is a small thing compared with a decent private practice, so that the man who has capital might be comfortably settled by the time he is prepared for obtaining school work.

Financially, the possession of a school post does not mean much. The average salary is £250, so that the house surgeon of a good hospital is nearly as well off, and even the junior posts in asylums, keeping in mind the fact that in them board and lodgings are provided, are equally good. The prospects for the future are vague. Many of us hope that it will pave the way to public health appointments; and others think, with what grounds it is hard to say, that the status of the school officer will greatly improve. Certain advantages of the work are obvious. Saturday afternoons and evenings and Sundays are the man's own, and he does not fear the bell or telephone at night. Moreover he has a regular salary.

What of the work itself? My work lies in a large county with several urban districts and one or two large, thinly populated rural areas. A prime difficulty is that of transit. For that one has to depend on trains and a bicycle, and these have a great influence on one's enjoyment or the reverse. Some

men use motor bicycles: presumably they are highly insured. Another difficulty of the county officer is that of feeding. He is for the most part dependent on country inns for his mid-day meal. In one inn I could get nothing but bread and cheese and beer, and the bread was straight from the oven. In another, of very similar stamp and circumstance, I lunched off roast pheasant at absurdly small cost.

Of these ups and downs the town officer can know nothing, and I for one would not change with him. The ride to school on a spring morning requites one for winter discomforts many times over, and it keeps one very "fit."

In the school itself there is much monotony about the work, unfortunately. One is, after all, inspecting fairly normal individuals, so that there is little to record save the occurrence of verminous conditions, decayed teeth, enlarged tonsils and adenoids, and cases of refractive errors. This, of course, is the fault of the scheme. In every school there are unhealthy children, and if one were permitted to devote oneself to a "selective" inspection the work would be much more interesting. As things are, the great aim seems to be to secure a statistical record of heights and weights, etc., of great masses of children—very interesting, no doubt, for the anthropometrist, but neither highly practical nor utilitarian. When "entrants" and "leavers" are being examined in routine fashion there may be so many of these to attend to that no time is available for those with obvious defects at other ages.

After some practice twelve, or even fifteen, children per hour can be inspected, and this rate of work must be maintained if the large numbers of children due for inspection are to be overtaken. Possibly fifty children are inspected daily.

Auscultation in a consulting room is one thing; in a room containing twenty children with iron-shod, restless feet it is quite another. Listening for mitral murmurs amidst such distracting noises, a stuffy room, fractious children, and an obstructive or garrulous teacher, is not of the easiest or good for the temper. When this process goes on day by day, week in and week out, and the prospect of the years is contemplated, summation of stimuli wins, and the inspector seeks pastures new. We have here struck a real difficulty, and one that will be more in evidence in the next few months. Already some authorities have had more than one medical officer, and, undoubtedly, the monotony of the work is the chief cause of the change. For this reason alone it is advisable that the work be done by general practitioners, under the supervision of a small permanent staff. The amount of work each man would have to do would be too small to produce ennui, and yet be sufficiently remunerative to induce the junior practitioner to compete for the post. In addition this policy would tend to allay the fears of medical practitioners that by degrees all their work will be taken out of their hands.

But the work is not without interest. When figures are compiled and one moves from district to district, interesting comparisons become possible. The frequency of measles and whooping cough in early life, of enlarged tonsils and decayed teeth, the relative frequency of spinal curvature, surprise one; still more, perhaps, the extreme commonness of deformed chests, and this seems to develop after the fifth or sixth year, strikes one at once. Unsuspected conditions are found in the way of heart lesions and spinal curvatures, also some remarkably interesting cases that have never found their way into consulting room or clinique.

Again, "mental deficient" afford interest to the keen clinician. The enormous number of these cases and the enormous need for something to be done for their control is a very real problem, and one that will have to be grappled with on a national scale at an early date. When one pauses to consider their ætiology,

their dependence on others, and their present liberty to propagate their likes, one realises the influence they have on national physique, economics, and the national future.

The tuberculosis problem is another that the school medical officer has to help to solve. Whether phthisis is a common disease of childhood or not is now a subject of debate; but other tuberculous lesions are extremely frequent, and an adequate answer to the question of what is to be done for them has still to be found. There are all sorts of questions similarly awaiting answer. "Free meals," "Open-air schools," "Special schools," "Exceptional cases," are frequent phrases in the vocabulary of the school medical officer. Only a few weeks at the work serve to make him a social reformer and the problems of his work are the salt of life to him. If he were relieved of the monotony of routine inspections his life would be a real joy.

OBSTETRICS.

RUPTURE OF THE UTERUS AFTER CÆSAREAN SECTION.

ANY medical man may be confronted by the question: Should a patient, in the presence of absolute indications for Cæsarean section, be sterilised at the time of the first section? It is clear that many different factors are bound to be duly weighed and considered before so important a question can be answered justly. Should the patient strongly desire to be freed from the dangers she would otherwise be obliged to run, it is scarcely justifiable to refuse to take the steps necessary for doing so. On the other hand, the patient may be most desirous of having other children, and it is possible for her to have them if she runs the risks attendant on repeated Cæsarean sections. Is it justifiable to allow her to run these risks? It is clear that she runs not only the ordinary risks of anæsthetic and laparotomy, but also the danger that her uterus, already scarred, may rupture along the line of the previous incision. The question is: What is the risk that such rupture through a Cæsarean cicatrix will occur during a subsequent pregnancy?

Professor Brodhead, of New York, is amongst the recent writers on the subject, and he notes the wonderful difference in the frequency of rupture after the older forms of Cæsarean section as compared with the results following the more modern operations. In 1886 Krukenberg stated that after the old operation 50 per cent. of all cases resulted in rupture of the uterus during subsequent pregnancies. He reported 20 cases of rupture through the scar with a mortality of 50 per cent. On the other hand, Olshausen states that a given instance he speaks of was the only one of scar rupture in at least 120 Cæsarean sections.

Much has been written in regard to the cause of rupture, but briefly put there seem to be but two main factors in its ætiology. One is the natural weakness of a cicatrix, whether in the uterus, abdominal wall, perineum, or elsewhere, and the other

is the invasion of the musculature of the uterus by decidual cells. If good approximation of the edges of the wound is secured, and interrupted sutures of chromic catgut are used, the result will be perfect as far as complete union of the parts is concerned; and in Professor Brodhead's opinion rupture of the Cæsarean scar is then very unlikely indeed to occur. He has analysed the available figures carefully, and he draws the following conclusions:—

1. That rupture of the uterus through the Cæsarean cicatrix is of rare occurrence.
2. That with prompt operative methods the mortality of such rupture is comparatively low.
3. That when pregnancy follows Cæsarean section the patient may be safely delivered again by section in a large percentage of cases.
4. That in repeating a Cæsarean section labour should be anticipated by a week or ten days.
5. That if Cæsarean section is to be repeated and labour sets in prior to the time fixed upon for the operation, the section should be performed as soon as possible after the onset of the labour pains.
6. That sterilisation may be done at the time of Cæsarean section if the patient so desires.
7. That in the case of rupture through the scar suture of the laceration has proved successful on occasion, but in some instances hysterectomy will be the method of choice.

In answer to our original question, it would seem that in the absence of any condition, such as carcinoma or fibroids, which in itself would indicate the removal of the uterus, the question of future pregnancy should be answered before the Cæsarean section is performed. The danger of repeated section and the possibility of rupture of the uterus during pregnancy and labour should be put before the patient plainly, and if she then elects to undergo repeated Cæsarean sections, she should be allowed to do so; indeed, she may do so without great risk.

OTOLOGY.

CLINICAL TESTS OF HEARING—I.

THE clinical investigations of the hearing power are analogous to the physical signs to be elicited in the examination of other bodily organs, but are also subjective in that they depend to a great extent on the patient's own sensations and statements. Tests are employed for two main purposes, the quantitative estimation of the amount of hearing power and the qualitative tests designed to distinguish between diseases of different parts of the auditory apparatus.

The accurate estimation of the degree of hearing is a necessary adjunct of the qualitative tests, and is, of course, also necessary as a standard by which to measure the future improvement during any course of treatment. The watch, though commonly used as a convenient test, is a very fallacious one. As the tick of different watches varies very largely, it cannot be used as a record to be compared with others examined by different observers and tested with other watches. But, more important than this, the tick of each watch varies at different times according to the lapse of time from its last winding and according to other indefinite circumstances. Another important objection is that the watch's tick is largely a musical sound, and therefore the hearing power of any patient, as tested by the watch, will vary according to the loss or retention of audition for high or low notes in the scale and be to a great extent independent of the ordinary capacity for hearing a simple noise. It is important, therefore, to employ a simple mechanical means for testing the hearing; the acoumeter produces, not a musical sound, but a small noisy click which is uniform in intensity, not only for the same instrument, but for all acoumeters. It consists of a movable and a fixed rod attached to a vertical bar; the movable part is lifted by the finger to a constant height and falls upon the fixed rod, thus producing the sound, which should be heard by the normal ear at a distance of sixteen yards. In testing, the eyes should be shut and the other ear firmly closed by the patient and the instrument is gradually approached at right angles to the tested ear until it is distinctly heard.

Speech is a most valuable means of testing hearing, because it is for speech that the hearing is most required, but it needs somewhat more care and experience to obtain reliable results. Both whispered and spoken speech can be employed; the former tests rather the hearing for high-pitched notes and the latter the lower part of the scale. Certain precautions must be taken; the patient should not sit near the wall for fear of reflection of the sound, and therefore the room should be a large one; the ear should be turned directly towards the examiner, the other firmly closed and the eyes should be shut. The patient is told to repeat what he hears and should be approached gradually, the distance being noted. To avoid guessing, isolated words should be employed. The examiner must cultivate a uniform low tone of voice; loud speaking is useless, as the vowel-sounds are alone increased thereby and the consonants are overwhelmed. When using the whisper, the examiner should first

almost empty the lungs by a deep expiration, as in this way a uniform loudness is obtained and the whistling of the air avoided. This whisper should be heard by a normal ear at 20 to 25 yards.

To examine the hearing power for musical sounds in different parts of the scale, tuning-forks are required. Three forks are sufficient for all ordinary purposes, namely, C 128, C² 512, and C⁴ 2048; the figures represent the number of double vibrations which each fork gives per second. The C fork must be provided with clamps to prevent overtones; in choosing these instruments it is also important to be sure that the higher pitched forks sound for a reasonable length of time, at least sixty seconds, for many C⁴ forks which are sold have far too short a duration of sound. To strike the forks a light hammer, padded like a drum-stick, is very useful and is necessary for the high-pitched instruments. A uniform gentle stroke should be cultivated, for too powerful a stroke gives rise to over-tones, to avoid which, also, the fork should be struck near the junction of the lower and middle third of the prong. The fork must also be held at a uniform distance of about two inches from the ear and always with the prongs either parallel to, or at right angles to, the meatus; in the diagonal position the sound is much weakened by the interference of the sound-waves from the two prongs, a fact which anyone may readily determine by experiment. The patient is instructed to listen attentively and to raise the hand the moment he ceases to hear the vibration. The examiner then carries the fork to his own ear and notes in seconds the duration over which he hears after the patient has ceased to perceive the sound; the result is expressed as *minus* so many seconds from the normal. This is a far more accurate method than to note the length of time during which the patient hears, as it eliminates variations due to the varying strength of stroke. This testing of the air-conduction with tuning forks of different pitch is of great diagnostic value, for in most cases of chronic middle-ear catarrh and especially in otosclerosis the hearing power for the lower tones, C 128, is markedly diminished, whereas in disease of the internal ear the upper notes are most impaired.

Galton's whistle is very useful for examining the upper limit of audition. It is simply a small whistle actuated by a rubber ball; the length of the pipe, and therefore the pitch of the sound, is altered by turning a screw and is registered on a scale marked to tenths of millimetres; a more elaborate and expensive modification, the Galton-Edelmann whistle, is more accurate, but the former is sufficiently reliable for ordinary purposes. It is held a foot from the ear and screwed up until the patient ceases to hear. The whistle is accompanied by a slight blowing sound which must be separately distinguished by the patient. Also it is difficult to block the other ear so that the shrill noise cannot penetrate, and this may be a source of error in testing unilateral cases; it should be noted whether the sound is still heard on closing the affected ear as well.

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

TWO REMARKABLE CASES OF PHTHISIS.

By E. BROWN, M.R.C.S., L.R.C.P. (Lond.).

THE first case was a young girl of 18 with early involvement of the right apex. There was slight dulness and crepitation over this area, accompanied by cough, expectoration of sputum containing tubercle bacilli, loss of strength and weight, occasional night-sweats, and evening temperatures of 99.5° to 101° F. In short, it was a typical case of early phthisis in a young subject. She was employed in business, but this was immediately given up, and the question was discussed of a sea voyage, residence at Davos or other mountain climate, or some form of open-air treatment. Eventually open-air treatment at a sanatorium was decided on, and this she underwent for three months. At the end of that period, however, there was a further loss of 7 or 8 lbs. in weight, the cough, expectoration, and night-sweats were no better, and the strength was less. As she was obviously not even maintaining her ground she returned home. Various drugs were tried for some time without lasting benefit. Guaiacol in capsule form seemed to do a little good, but it had to be abandoned after a short trial, as it interfered with digestion and caused sickness. I heard, however, of guaiacose, which contains guaiacol in a non-irritating form, and immediately prescribed it. Very soon the patient began to regain her appetite, and her digestion improved. She took the preparation well from the commencement, and the gradual loss of flesh ceased. In three or four months' time she was putting on weight slightly, while the night-sweats and temperatures had disappeared. She was residing for over a year in a cottage situated on high ground, and though living largely in the open air no special details of that form of treatment were followed. At the end of six months' time she had gained 7 or 8 lbs. in weight, had a good appetite, and all that troubled her was a slight cough. Expectoration was practically nil. When I saw her last she weighed over a stone more than she had ever done before, was able to take long walks and to cycle; in fact, she was enjoying normal health. All that could be detected on examination was a slight occasional "crick" over the right apex on a very deep inspiration. She has since gone to Virginia, U.S.A., and the last report was "perfectly well and strong." The case was under observation for nearly two years from the commencement to the time of writing. In the early phases of her case she must have taken gallons of cod-liver oil and various tonics all to no purpose. If the case is not a "cure" in the strict sense of the term, there does appear to be an absolute arrest of the tubercular process.

The results in the second case were even more striking than in the first, as the latter was just the type in which, under favourable surroundings, one hopes for a cure or, at least, a very marked arrest of the disease. Case II. was one of phthisis in a lady of 63 involving a great part of the left lung, physical signs being present from apex to base, and also the

upper lobe of the right lung. Though the disease had obviously been present for some considerable period, she was under no direct treatment, and had not been confined to bed, except for intercurrent attacks of bronchitis, when I first saw her in January 1909. She was then in bed, with great dyspnoea on the least movement and some superadded bronchitis. She had been nursing her daughter for some slight ailment and had broken down under the exertion. There was considerable pain over the left lower ribs in the axillary region, evidencing the presence of pleuritic patches. Shortly after I first saw her she had a hæmorrhage from the lungs, and for a week was dangerously ill. The ordinary treatment of hæmoptysis was followed, and under careful nursing she gradually recovered, but the following symptoms persisted: Dyspnoea, extreme weakness, absolute loss of appetite, cough and expectoration, and dyspepsia on taking any solid food. I put her on guaiacose as soon as the hæmorrhage had subsided, and have persisted in its use to the present time. By Easter she was able to get up a little each day, although she still had no appetite and her condition as to strength remained stationary. Then, with occasional set-backs she began to improve. In a month's time she was able to get out for a little while in a bath-chair, the appetite began to return, the digestion improved, and the cough and expectoration greatly diminished. At the time of writing she is able to walk round to my house and back—about half a mile—has no pain, night-sweats, or temperatures, eats and sleeps well, and only has very slight expectoration. She is still taking guaiacose. Though her weight has not been taken, she has obviously gained considerably. Of course, physical signs remain to tell the tale, but hardly ever are any moist sounds to be detected. She is now able to pursue to a great extent her ordinary social life.

Although the case is too advanced for one to be very hopeful eventually, there has been under the use of guaiacose a marked arrest of the disease. These cases seem to afford reasonable ground for the hope that phthisis may be effectually checked by adopting the dual method of treatment supplied by guaiacose. I am well aware that one swallow does not make a spring, but I have been so impressed by the fact that only to the preparation could the improvement in the foregoing cases be attributed that I think it right to publish my experience. I need hardly say that guaiacose is in no way a secret preparation. It is simply a five-per-cent. solution of guaiacol-calcium-sulphonate in liquid somatose. The guaiacol salt is non-irritating, although potent, while the somatose supplied easily assimilated nutriment. The *motif* of the compound is obvious. The system is braced up, the appetite improved, and gradually the digestion of ordinary diet made possible by the food contained, while the specific action of guaiacol in pulmonary conditions is well established.

THE PRACTITIONER'S RELAXATIONS.

A SUMMER HOLIDAY IN NORTH-WEST AMERICA.

CALGARY was in the clutches of a venomous blizzard when the west-bound train clanged its monotonous bell and steamed out to the accompaniment of the flagman's cry "All aboard, right now." We headed for the mountains, and long before we reached them the jagged line of white-capped peaks seemed to tower above and around us. So gradual was the ascent that we were surprised when we really found ourselves in the midst of their ravines, great rocky masses rising up on every side. The patient train wound in and out amongst buttress and boulder and precipice, along a narrow trail through the Kicking Horse Pass that is a triumph of engineering skill and bravery. We were still rising into the heights when darkness fell.

Sunrise and morning found us well in British Columbia: still mountains, still rocks and ravines; but now we mostly followed the shores of great silent lakes, with here and there the orchard of a lonely fruit grower perched between rocky hillside and water's edge. Brilliant orange and scarlet and yellow coloured forest and mountain, but desolate and unpopulated. Now and again we passed a lumber camp, where Hindoo and Japanese work side by side with the white man; sometimes a little village with orchards and fields, but mostly Nature was alone. For many miles we wound along the banks of the great Fraser River, and often on the hillside a solitary grave told of a prospector's end or a trapper's fatality. Towards evening, suddenly, from out of the wilderness of fir-clad Selkirks we whirled down on our terminus, Vancouver, a charming city of trees, mountains, waters, and mist. The shops, streets, and bustle spoke of civilisation again, and came refreshingly after many months of a western village. Stone buildings and paved streets looked solid, comfortable, and home-like after the shabby wooden shacks and stores of the Prairie Provinces; and well-kept gardens and parks told of an English love of order and decency. Stanley Park, one of the beauties of the city, is a piece of the wild British Columbian land preserved and trained in the midst of shop and street. Enormous trees, maples, sycamores, and oaks reach down to the waters of the Sound, which nearly encircles the Park; streams, waterfalls, dells, woodland paths, and luxuriant undergrowth make scenes of surprising beauty. Many varieties of birds and waterfowl, also buffalo and elk, are to be seen, and the ferns would be a botanist's delight.

It was almost with regret that I had to continue my journey by steamer across Puget Sound to Seattle. There we found one of the most enterprising cities in the world; wherein, however, the citizens are still dissatisfied, for the site is very hilly, and only allows of street cars on the cable system. They have therefore engaged in the Herculean task of levelling it to suit their wishes. Enormous banks are washed away by water pumped from the Sound, and the hollows filled up with the superfluous earth; mountains indeed being levelled, and the valleys

made plain. This wonderful labour is taking place all over the city at enormous cost, but it pleases our cousins to work their will in Nature as in commerce. The winding bays, high mountains, and extensive forests that surround Seattle were mostly enveloped in mist and fog, but now and again we got glimpses of such scenery as would make any city famous. We obtained a better idea of the beauty of Washington State as the steamer threaded its way down Puget Sound to the Pacific, with Vancouver Island on the north.

During our southward course we were long in sight of land, and lazily watched the purple mountains rising out of the blue foam-flecked ocean, with here and there green and indigo patches where forests clothed the hillsides, and over all a cloudless azure sky. Whales we saw on two occasions, spouting fountains of water, and frequently gambolling schools of porpoises passed the steamer within a few yards. Early on the fourth morning we woke to find ourselves at anchor, and watched the sun rise through mist and fog-bank on an almost foreign-looking town; buildings of many colours crowded up and down the steep hills that reached to the water's edge; masses of tall, dark trees threw deep shadows on street and house; and surrounding all was a yellow, sandy, desert-like land. We soon found that San Francisco is nevertheless very modern, very American, very up-to-date. It has largely been rebuilt since the earthquake and fire of 1906, and but few signs remain of that terrible devastation. The streets are for the most part very crowded and busy, but here and there one comes unexpectedly upon quaint out-of-the-world corners; the peaceful old church of the Franciscan missionary fathers; the quiet cemetery with palms and cypresses and rose-trees; an occasional low Spanish house left by chance among the brick and stone of modern days.

There are many attractions in San Francisco, but naturally our first excursion was across the harbour, past its islands and fortifications, to Berkeley, where the University of California is situated. Passing through an extensive park of ancient trees, oaks, sycamores, and many others which were unfamiliar to me, we finally reached the well-kept grounds surrounding the numerous scattered buildings of the University; long, low battlemented buildings of dark brick, all almost covered with Virginia and other creepers, now scarlet and orange with their autumn leaves. Each department appeared to be quite distinct, with well-equipped laboratories and necessary ante-rooms. Owing to the hurried nature of our visit, we were unable to see over the University as we should have wished.

Another of San Francisco's beauties is the Golden Gate Park, the third largest artificial park in the world. It was wonderful to look on those massive trees, luxuriant vegetation, flowers and shrubs, and to realise that only a few years ago it had been a

desert of shifting sand dunes. The Golden Gate itself is the narrow opening of the harbour with its forts on either side, and as the steamer passed through we met the heavy rollers of the Pacific. For the rest of our journey we were in view of the Californian coast, great rocky hills rising precipitously from the sea, for the most part bare of vegetation. Here and there were sheltered bays with sandy beaches, and small towns clustering amid palm and eucalyptus and pepper trees on their shores. At some of these we put in for a few hours; Santa Barbara, with the Santa Inez mountains for a background, and one of the chain of old mission churches on the hillside; Redondo, with beautiful gardens where humming-birds, bees and butterflies disport themselves all winter; San Pedro, a busy

little town with its eye on the present opportunity, and holding no links with past or future; and finally, rounding Point Loma, with the golden dome of the Theosophical College glittering in the setting sun, we entered the long, winding harbour of San Diego. Here, a partially Latin town, the southern love of art and colour shows in many ways; picturesque buildings, new ones built in the old Spanish architecture, old ones rebuilt and restored; a plaza, with well-kept grass and huge palm-trees, standing in one of the busiest thoroughfares; gardens with roses and passion-flowers, bushes of purple bougainvillæa and hedges of geranium and fuchsia. Continuous sunshine, brilliant blue skies, and warm moist breezes from the ocean are the lot of this fortunate town in which I ended my journey. E. M. M.

DERMATOLOGY.

ECZEMA IN BABIES.

INFANTILE Eczema is one of the most troublesome complaints with which a physician has to deal, the reason being that no eczema will get well unless protected from local irritation, and in babies it is a very difficult matter to prevent rubbing and scratching. Eczema is a common complaint in infants of from three months to two years of age, and in these patients it always presents a very characteristic distribution. It is said to occur upon the buttocks in babies, but none of the various symptoms to which this region is liable in infants is really eczema. True eczema—an eruption marked by a red, more or less swollen condition of the skin attacked, with closely set pin-point vesicles, excoriations, or crusts over this area, accompanied by intense itching, and showing a great tendency to exacerbation as the result of any local irritation—is seen, in infants, always upon the face. It may also attack other parts, especially the scalp, the forearms, and the legs below the thighs, and in rare instances it may even become almost generalised; but in every case it is present upon the face.

The distribution of this affection is remarkable. It generally begins upon the cheeks and forehead as a diffuse redness and roughness of these parts, with minute vesication, or with crackling and oozing. It then spreads more widely over the face and scalp, but, curiously enough, it never attacks the skin around the eyes, of the nose, or around the mouth, so that the general appearance is that of a mask, with holes for the nose and eyes and mouth. When the inflammation becomes more marked, as it very soon does, owing to the fact that the intense itching induces the infant to scratch the parts or to rub them violently against any object within reach, then there may be much crusting from the coagulation of the abundant serous discharge. Soon there appear patches of eczema upon the forearms, where the child rubs them against its face, and upon the calves, from the rubbing of one leg with the foot of the other. The cause of all this trouble is generally very difficult or impossible to arrive at. Often the babies are other-

wise apparently in good health, and frequently no error in diet can be discovered; while, of course, very many babies are badly fed, insufficiently fed, or over-fed, without getting eczema. It is not very unusual to find that before the attack the mother has been in the habit of using some sort of strong soap for washing the infant, and although this cannot be regarded as the cause of all eczema in infants, it is no doubt a very frequent exciting cause. But although we are so seldom able to find any internal cause, we know well that all local irritation keeps up the eczematous condition and increases it.

It is obvious, therefore, that in the treatment of a case of infantile eczema, the main thing is to protect it from local irritation. If this can be secured absolutely for a few weeks the eczema will disappear, although no attempt has been made to deal with it by dieting or by internal remedies. The first thing is to avoid the intermittent application of water for washing purposes, and to keep the affected parts constantly protected by some simple dressing. If there is much crusting a continuous application of normal saline solution (sodium chloride 3j. to Oj. of boiled water) on lint will be found useful until the crusts are removed, but in most cases it is sufficient to begin with a dressing of Lassar's paste (zinci oxidi 3ij., pulv. amyli 3ij., vaseline 3ss.) spread upon a mask of fine butter-muslin and carefully bandaged on. This must be changed once or twice in twenty-four hours, removing the old dressing each time with liquid vaseline, and not with water. The greatest difficulty will be experienced in preventing the child from scratching or from rubbing its face against its arms or the bed-clothes, and means must be devised for fixing the head as much as possible and for tying up the hands. Sometimes, if the healing of an eczematous part is slow, it may be hastened by painting it with a 1 per cent. solution of nitrate of silver from time to time. There are probably many other simple protective applications which would answer as well as Lassar paste, the main object being to protect the affected areas from the irritation of scratching and rubbing.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

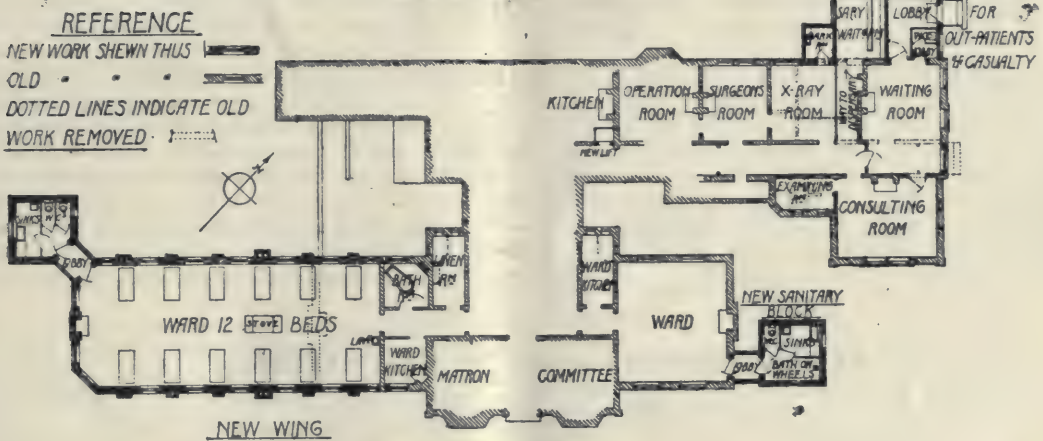
RECONSTRUCTION OF THE CHELMSFORD INFIRMARY.

THE alterations and additions to this hospital, which have recently been completed and were formally opened by Lady Rayleigh on June 8, are the outcome of the advice given to the Governors at the annual meeting in January

in particular it was pointed out that the wards were overcrowded to an extent that severely handicapped the patients' chances of recovery; that the sanitary offices were insufficient and not properly disconnected from the wards;

CHELMSFORD INFIRMARY·ESSEX· PLAN SHEWING ALTERATIONS & ADDITIONS.

SCALE OF FEET



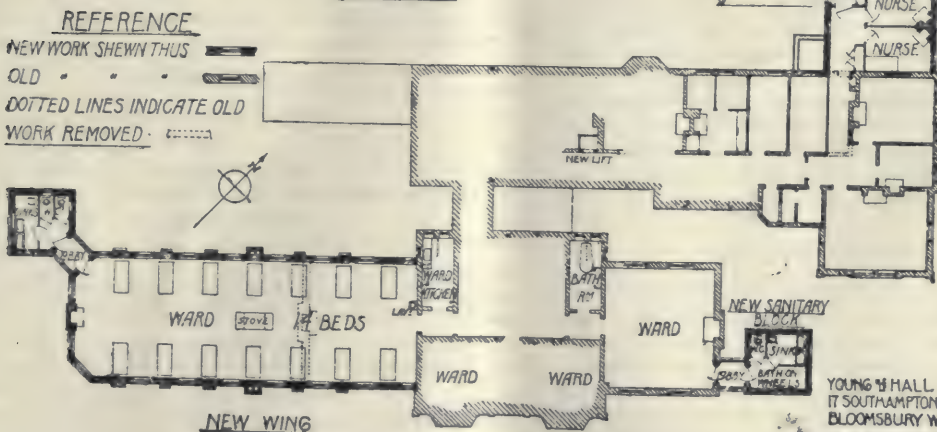
GROUND FLOOR PLAN.

1908 by Sir Henry Burdett and Mr. Pearce Gould. Previously to the meeting both gentlemen had been round the hospital with the Chairman, and the result of their inspection was that the existing arrangements were condemned;

that the accommodation for nurses was inadequate and not up to the standard of modern times; that the provision for isolation was ill devised; and that the out-patient department required to be entirely rearranged. The Committee,

CHELMSFORD INFIRMARY·ESSEX· PLAN SHEWING ALTERATIONS & ADDITIONS.

SCALE OF FEET



FIRST FLOOR PLAN.

JOINT ARCHITECTS
W.M. PERTWEE
CHELMSFORD

convinced of the importance of the points thus raised, determined to give effect to the recommendations which were made on so high an authority, and instructed Mr. Keith Young to draw up a scheme for carrying these recommendations into effect.

The plans show the additions which have been made to the hospital in accordance with the scheme thus prepared.

The hospital, before the alterations were carried out, contained on the ground floor one ward 24 ft. by 21 ft. 6 in., and one 24 ft. by 12 ft., and on the first floor two wards 24 ft. by 21 ft. 6 in. In the rear building was a ward intended for isolation, but generally used for ordinary patients, and a second room which is now the nurses' sitting-room was also used for patients. Two small rooms in the front on the first floor were, and still are used for paying patients.

The only sanitary offices in connection with the wards were w.c.'s leading out of the ward kitchens.

On the south-west side of the front building the end ward was removed and a new ward block two stories high was built.

On the ground floor is a ward for 12 beds, and on the upper floor a ward for 14 beds. The sanitary offices, comprising a large sink-room and two w.c.'s, are placed in a detached block connected with the ward block by cross ventilated bridges. The small room on the ground floor in front, formerly the nurses' sitting-room, is now a ward kitchen, and the back room, formerly the cook's bedroom, is a bath-room. The former ward kitchen, in which was a w.c., has been converted into a linen-room.

The north-east wing could not be enlarged on account of the proximity of the back building; all that was done was to provide a suitable sanitary block properly disconnected. In this block there is a sink-room, a w.c., and space for filling and emptying a wheel bath. The w.c.'s were cleared out of the two ward kitchens in this wing and the ground-floor kitchen converted into a bathroom.

At the back a wing has been built out which contains on the ground floor a new entrance for patients, a large casualty-room, a new dispensary with a medicine waiting-room and patients' exit, and a small dark room attached to the x-ray room. The old surgery, with the former entrance thrown in, has been converted into patients' waiting-room, and the old waiting-room is now the consulting-room. The space occupied by a w.c. and lobby and a cupboard has been thrown together to form an examining-room leading out of the consulting-room. The old dispensary, with store-rooms adjoining, now form the x-ray room.

On the upper floor the new wing contains two additional bedrooms for nurses and two isolation rooms, with a nurses' room, a w.c., sink-room, and small duty-room. These wards are cut off from the main building by an open lobby.

In this back building the rooms formerly used for patients have now been devoted to the use of nurses, one room overlooking the garden forms a spacious and cheerful sitting-room. The nurses' quarters are now as good as they can be made.

The whole of the work was designed and carried out by Mr. Keith Young (Young and Hall) and Mr. W. H. Pertwee, of Chelmsford, acting in conjunction.

NEW APPLIANCES AND THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

"VINDEVIE."

JUICE OF GRAPES.

SOLE IMPORTERS, MESSRS. SCHWEPPE'S, LTD.

THE product before us—"Vindevie"—is an unfermented wine and consists of grape juice treated by a special process. This process consists essentially in a combination of pressure and sterilisation. The product contains none of the chemical preservatives which are used so freely in the preparation of the various kinds of fruit-juice cordials; it further contains no alcohol and no excess of sugar, as in the many fruit-syrups on the market. "Vindevie," either diluted with twice its volume of water or soda water or undiluted, has an exceedingly clean, refreshing, and pleasant taste. It contains all the constituents of good grape-juice, and hence is available for all the therapeutic uses of grape-juice, such, for instance, as constipation, anæmia, and those blood conditions in which the exhibition of the organic and inorganic salts of grape-juice is indicated. We are pleased to have received a sample of this beverage, and we think it can well be recommended by the medical profession, and has a very extensive sphere of usefulness before it.

"CHELTINE" FOODS.

(CHELTINE FOODS AND CHOCOLATE CO., CHELTENHAM.)

WE have received several samples of these foods—e.g. brown-meal biscuits, almond biscuits, cocoanut biscuits, meat biscuits, and white-meal biscuits, also "Cheltine" diabetic food, consisting of a powder with a biscuit-like taste. Various domestic receipts are given for the utilisation of "Cheltine" food in ordinary cookery. We have also received a notice of a new artificial sweetener in liquid form made by the same manufacturers, to which the name

"Porcherine" is given. This latter substance is capable of entirely replacing sugar in the dietary. The London agent for all these preparations is Harrods, Ltd. The "Cheltine" foods and preparations are intended for patients suffering from diabetes or glycosuria. They, however, contain starch in such a form as to give the usual iodine reaction, but it is claimed for them that they can be taken by diabetics without increasing the sugar of the urine. The samples are accompanied by clinical evidence confirming the value of these preparations in cases of diabetes. The taste of the biscuits and the powder is quite pleasant, and we think the products are to be recommended, but in cases of severe glycosuria or true diabetes it will be necessary for the medical man to watch carefully their effect upon the excretion of glucose.

BOOKS RECEIVED.

H. J. GLAISHER.

"Lectures on Hysteria." By Thomas D. Savill, M.D.

JOHN MURRAY.

"Children in Health and Disease." By David Forsyth, M.D., D.Sc.

"In a Good Cause," Stories and Verses on Behalf of the Hospital for Sick Children. By various authors.

J. B. LIPPINCOTT CO.

"International Clinics." 19th Series. Vol. II.

J. WRIGHT AND CO., BRISTOL.

"Arthritis Deformans." By R. Llewellyn Jones, M.B.

JOHN WRIGHT AND SONS, LTD.

"Pye's Surgical Handicraft." Fifth edition. By W. H. Clayton-Greene, B.A., M.B., etc.

NEWS AND COMING EVENTS.

LORD SANDHURST, Treasurer of St. Bartholomew's Hospital, has received from the Worshipful Company of Skinners the sum of £200, being the first instalment of a grant of £1,000 towards the capital fund of the hospital.

THE Vice-Chancellor of London University, Professor M. H. M. Hill, Sc.D., F.R.S., has appointed Dr. A. D. Waller, M.D., C.M., LL.D., F.R.S., Director of the Physiological Laboratory, to represent the University at the inauguration of Dr. A. L. Lowell as President of Harvard College on October 6 and 7.

To provide for larger demands upon the resources of the University next session, the Senate of Belfast University has sanctioned the expenditure of £1,500 for the better equipment of the departments of physiology and pathology, pathological laboratory, physics, chemistry, zoology, archaeology, anatomy, botany, and geology.

DR. WILLIAM WILSON, M.R.C.S., L.R.C.P., secretary since 1901 of the Friends' Foreign Mission Association, died at Hitchin on July 27 from heart failure, following an operation for appendicitis. Dr. Wilson went out as a missionary to Madagascar in 1877, and in 1880 he came home for medical training, and subsequently qualified. At the time of the French occupation Dr. Wilson was in charge of the Friends' Hospital at Tananarive. His loss will be felt deeply in the missionary world.

THE following Fellows of the Royal College of Physicians of London have been elected officers for the ensuing collegiate year :—Censors : Sir W. Allchin, M.D.; F. de Havilland Hall, M.D., Seymour J. Sharkey, M.D., J. Kingston Fowler, M.D. Treasurer : Sir Dyce Duckworth, M.D., LL.D. Emeritus Registrar : Dr. Edward Liveing. Registrar : J. A. Ormerod, M.D. Harveian Librarian : Dr. J. Frank Payne. Members of the Library Committee : Norman Moore, M.D., W. Osler, M.D., F.R.S., A. F. Voelcker, M.D., C. A. Mercier, M.D. Curators of the Museum : Sir William Allchin, M.D., S. J. Sharkey, M.D., W. Hunter, M.D., and F. W. Andrewes, M.D.

BRITISH MEDICAL ASSOCIATION.

THE concluding day's proceedings of the British Medical Association were entered upon on July 30 in the Queen's University, Belfast. Several of the sectional meetings were attended by the Lord-Lieutenant and the Countess of Aberdeen. The concluding business meeting was held in the library, when, in the presence of the Viceregal party, Sir William Whitla (president), and a very large number of the members, Sir John W. Byers, M.D., Belfast, delivered an address on the present position and the future developments of obstetric medicine. In reply to a vote of thanks to the Lord-Lieutenant and the Countess of Aberdeen, proposed by Sir William Whitla, Lord Aberdeen said he ventured to say that one of the dominant features of the week's addresses was the brightness and hopefulness that seemed to permeate them, and which would help and stimulate not only the members of their great profession, but that larger public who were paying attention to what was taking place at their meetings. They would all be delighted when the association came again to Ireland, but he hoped it would meantime visit Aberdeen, where they would have a warm welcome. The Viceregal party in the evening attended a reception given to the members of the association by the president and members of the Ulster branch.

THE King has been graciously pleased to sanction the appointment as a Knight of Grace in the Order of the Hospital of St. John of Jerusalem in England of Mr. Fred Hibbert Westmacott, F.R.C.S., who has previously been an Honorary Associate of the Order.

THE Baly medal, founded by Dr. F. D. Dyster in 1866 "*in memoriam* Gulielmi Baly, M.D.," and awarded every alternate year, on the recommendation of the President and Council of the Royal College of Physicians of London, to the person who shall be deemed to have most distinguished himself in the science of physiology, has been awarded to Emil Fischer, Ph.D., Professor of Chemistry in the University of Berlin; and the Moxon medal, founded in 1890, in memory of Walter Moxon, M.D., and awarded every third year to the person who should be deemed to have most distinguished himself by observation and research in clinical medicine, to Sir William R. Gowers, M.D., F.R.S.

A REPORT by Professor Karl Pearson was presented at a recent meeting of the Senate of London University, showing the progress of the work of the Francis Galton Laboratory for National Eugenics during the past 16 months. The Senate have voted their cordial thanks to Sir Francis Galton for a further donation of £500 for the maintenance of the laboratory, and recorded their high appreciation of the services rendered by Professor Pearson, under whose supervision the work is carried on. Mr. David Heron and Miss E. M. Elderton have been reappointed respectively Galton Research Fellow and Galton Research Scholar for a year from next February.

PUBLIC SLAUGHTER-HOUSES.

The following Memorial has been presented by the Humanitarian League to the Right Hon. John Burns, M.P., President of the Local Government Board :—

Sir,—In view of the fact that it is over four years since the Committee appointed by the Admiralty to consider the Humane Slaughtering of Animals reported strongly in favour of replacing private slaughter-houses by public abattoirs; that the same course was advocated in the Report of the Royal Commission on Tuberculosis in 1896, and has been urgently recommended by the Public Health Committee of the London County Council and by a number of leading medical and sanitary authorities; and that London is in this respect far behind the great majority of continental cities, and not a few provincial ones, such as Glasgow and Edinburgh; we desire to appeal to you to take the necessary steps to give effect, in the Metropolitan district, to this much-needed but long-delayed reform.

Among the signatories are the following eminent members of the medical profession :—

Sir James Crichton-Browne, M.D., D.Sc., LL.D., F.R.S.
Sir Thomas Barlow, Bart., M.D., D.Sc., F.R.C.P., etc.
Sir Samuel Wilks, Bart., M.D., LL.D., F.R.S., etc. (Consulting Physician to Guy's Hospital).
Sir Jonathan Hutchinson, F.R.S., F.R.C.S.
J. Mitchell Bruce, Esq., M.A., LL.D., M.D., F.R.C.P.
James Cantlie, Esq., M.B., F.R.C.S.
Alex. Hill, Esq., M.A., M.D., F.R.C.S., J.P.
Alex. Haig, Esq., M.A., M.D.
Sir Arthur Conan Doyle, M.D.

The Medical Officers of Health for Bermondsey, Deptford, Fulham, Greenwich, Hackney, Hampstead, Holborn, Islington, Lambeth, St. Marylebone, Shoreditch, Southwark, Stepney, Stoke Newington, and Woolwich.

July 29, 1909.

MISS IVY E. WOODWARD, M.D. London, having passed the required examinations, was admitted, at the last comitia of the Council of the College, a member of the Royal College of Physicians of London. Dr. Woodward is thus the first female student admitted to the membership of the College. She received her medical education at the London School of Medicine for Women, in connection with the Royal Free Hospital, and she has held the posts of clinical assistant, house physician, and assistant clinical pathologist. She is also clinical assistant at the Royal Hospital for Diseases of the Chest and the New Hospital for Women.

AMONG recent questions and answers printed and circulated with the papers before the House of Commons, the following referred to the status of women in the Royal College of Surgeons. Dr. Rutherford asked the Home Secretary whether, in view of the fact that the Royal College of Surgeons of England was unable, through the provisions of the Medical Act of 1876, to confer the rights and privileges of the college to women who were admitted to its diplomas, he proposed to grant a new charter to the college; to which Mr. Gladstone replied: I have no power to take any such action. I understand that a supplementary charter for the Royal College could only be granted by the Crown on the petition of the governing body.

THE annual meeting of members of the Association for Promoting the Training and Supply of Midwives was held recently at Chelsea. Mrs. Wallace Bruce, who presided, said that a great change had taken place since the passing of the Midwives Act in 1902. Until then two-thirds of births in the country took place without trained supervision, but now this proportion is about to be reversed. Last year the association trained 20 nurses; this year they were training 40. Next year the Act would come finally into operation; no untrained woman would be able to practise, and the need for trained women would be great. All the funds now at their disposal would be exhausted that year, and they would have to make a fresh appeal to public generosity.

THE METROPOLITAN ASYLUMS BOARD IN 1908.

THE annual report of the Metropolitan Asylums Board for 1908 came before the managers on Saturday, July 17, at a meeting presided over by Mr. J. T. Helby, the Chairman. The report, which was submitted by the Statistical Committee and adopted, stated that although the large number of fever and diphtheria patients under treatment in the board's hospitals during the spring of the year caused some apprehension, the maximum number under treatment (reached on November 30) was 1,856 below the highest level reached in 1907, which was a record year, as many as 7,158 cases having been at one time under treatment. The total number of patients admitted during 1908 was 27,967, with 1,255 deaths. The mortality per cent. was: Scarlet fever, 2.56; diphtheria, 9.73; enteric, 16.28; cerebro-spinal meningitis, 40.0; other diseases, 5.68. Not a single case of smallpox was admitted into the board's hospitals from the Metropolis, though one case was received from Leyton. The cases of mistaken diagnosis in respect of infectious diseases other than smallpox which were admitted last year numbered 2,594, the percentage of error among cases certified as scarlet fever being 6.1, among diphtheria cases 22.2, and among enteric fever cases 39.1. Owing to the death of Dr. Hume, medical superintendent of the North-Western Hospital, the Hospitals Committee recommended, and it was resolved, subject to the assent of the Local Government Board, that Dr. J. McCombie be transferred from the medical superintendentship of the Brook Hospital to that of the North-Western Hospital. Dr. McCombie is the senior medical superintendent under the board, and he has intimated his willingness to be transferred.

At Swansea Assizes on Saturday last, Dr. Howell Thomas Evans, a medical practitioner at Blackwood, Monmouth, claimed damages from the Great Western Railway for personal injuries, and was awarded £3,500 damages and costs. The plaintiff's train, on a journey from Cardiff to Newport, collided with a mineral train, and one coach telescoped another. Dr. Evans and the other occupants of his compartment had to be rescued through the window.

THE Royal Boscombe Hospital, Bournemouth, is to be congratulated on an anonymous gift of £4,000 to defray the cost of erecting a ward for children. The new block will include a large ward containing 12 cots, with a cubic air-space of 1,462 feet per patient, and a floor area of 112 feet. The new ward will have a large covered balcony facing south, and will contain in addition bathrooms, ward-kitchen, larder and surgical-store, together with rooms for patients' clothes and linen. Care is to be taken to make the new block as hygienically perfect as possible.

THE HOME OF RECOVERY.

THE following important announcement appeared in the newspapers on August 2:—

"Mr. Ernest Frederick Schiff, of Carlos Place and Warnford Court, has presented, through Mr. Mayo Robson, to the managing committee of the Home of Recovery, of which H.R.H. Princess Louise is president and the Earl of Lytton is chairman, the magnificent sum of £100,000. Part of this sum has been expended upon the purchase of a charming and suitable property within seventeen miles of London, to which the patients will be conveyed by motor ambulance straight from their beds in the hospitals. The remainder will be added to the funds already in the hands of the Committee and will serve as a permanent endowment of the home. This announcement is appropriately made public to-day on the anniversary of the death of Mr. Alfred George Schiff—the brother of the generous donor—in whose memory the gift has been made. The Institution will be called 'The Schiff Home of Recovery' to perpetuate the name of one who was widely known during his life for his sterling qualities and for many philanthropic acts performed in a silent and unostentatious manner."

The Home of Recovery for Surgical Patients was founded in 1907 under the presidency of H.R.H. Princess Louise, Duchess of Argyll. The Messrs. Schiff have for many years been much respected members of the Stock Exchange, and the late Mr. A. G. Schiff, who left an estate valued at over £570,000, was a generous and unostentatious friend to a large number of medical and other charities. "The Schiff Home of Recovery" will enable surgical patients when they leave the hospitals in which they have undergone operations to continue the treatment which will equip them for a satisfactory resumption of their customary occupations. Hospital surgical patients are frequently discharged on account of the pressing claims of others who are waiting for admission before they have sufficiently recovered. The Schiff Home will accelerate surgical treatment in hospitals and permit a freer interchange of in-patients, since those who pass thither from surgical wards will be supplied with a continuance of whatever treatment may be necessary in order to bring about their complete recovery. Mr. E. F. Schiff has set a noble example to those who possess wealth. The Home of Recovery should prove a boon to the surgical in-patients of hospitals and to the hospital authorities as well, whose difficulties have long been accentuated by the absence of any large institution for recovering surgical patients.

NURSING ADMINISTRATION.

THE ADMINISTRATIVE SIDE OF SANATORIUM WORK.

II.—THE DOMESTIC STAFF.

It is obvious that in an open air colony containing accommodation for thirty or forty patients there is a great deal of work to be got through. But unless the sanatorium is to be maintained at an enormous cost, the domestic staff must be strictly limited to the number of persons found necessary to supervise the patients in doing everything for themselves. The principle must be established from the outset that the patients are the staff, but in carrying it into practice and producing a sense of ordered tranquillity instead of scramble and discomfort, the co-operation of permanent trained members of the staff must be relied on. The more highly skilled in their special duties these permanent members of the staff become, the easier it will be for the whole household.

The cook is perhaps the most important functionary in the colony next to the matron. She will have to cope with large appetites, and it should be her pride to gratify them at the smallest possible expense. She ought to be an adept in the art of producing variety with plain materials, a good manager, well grounded in the knowledge of food values, and thoroughly practised in the science of economy. It is foolish policy to pare down the cook's salary and thus procure only an uneducated woman, when by securing the right kind of person the sanatorium may easily save as much as two or three hundred a year. A cook trained on good modern lines should receive from £40 to £60 a year, and the position is one to attract an educated woman. She would need a strong permanent kitchenmaid under her, but for much of the routine work in her department she would look to the female patients, and she should be capable of using unskilled labour and turning it to good account. In such an institution, even when life is mainly lived out of doors, there is much scrubbing and swabbing to be done. For this, which is not always suitable work for phthisical patients, it may be advisable to get in outside help, paying by the hour, this being exactly the kind of help which can readily be obtained in any village at small cost. The washing up, which requires special care in a colony of this kind, would be carried out by the patients under the supervision of the cook, who would control all the workers employed in her special department.

The general house-work includes the cleaning and keeping in order of all the living rooms, dormitories, verandahs, and open-air sheds; the serving of meals, attendance on those who are in bed, attendance on the matron and nurses, answering the door, and such general duties as filling lamps, lighting gas, attending to fires, cleaning metal fittings, etc. There must be one head housemaid, with a good head on her shoulders, on whom the matron can depend for such part of the day's routine as cannot well be performed by the patients. It will be her duty to superintend the work of the female patients,

both in the dormitories, and in other directions; and it is essential that she should possess a pleasant manner in fulfilling this duty, and be capable of entering into the true spirit of the house. In practice it is sometimes found inadvisable to employ women on the men's side, and there should be a permanent manservant, who may with advantage be an old patient, to undertake the charge of the men's dormitories, supervise the male patients' duties in this department, bring in the coal, etc. It will be seen therefore that the permanent domestic staff need not consist of more than four persons—cook, kitchenmaid, head housemaid, and man. But the success of the whole establishment depends on all being thoroughly efficient. False economy in the direction of wages is responsible for a great degree of unnecessary expense in the end.

When all is told the wages bill of the permanent staff will not be heavy.

Cook	...	...	£50
Kitchen-maid	...	...	18
Housemaid	...	...	22
Man-servant	...	...	20 (old patient)
Total	...	...	£110

Reckoning for a household of some fifty persons, this total is small indeed. True it provides only four persons, but then every member of the tiny staff is well chosen, thoroughly to be depended on, and capable of playing a part in the difficult task of utilising a mass of unskilled and continually changing labour in the various departments of the establishment. If the wages were lowered and inferior people were engaged for these posts, it would be impossible, without general waste and confusion, to work the colony with so small a staff. And the additional cost may easily be estimated of adding two or three extra persons, with their board and wages, to the numbers above indicated. An increase in wages is a mere trifle in comparison.

The organisation of the housework is a matter demanding considerable skill and method on the part of the matron. But in every colony containing female patients the difficulty is rather to find work for all those capable of employment than to find workers. A regular routine is speedily established, and if a high standard is maintained the patients take a keen interest in keeping things smart. It is a great mistake to let any impression gain ground that being a working colony nothing matters very much. In the outdoor life slovenliness and slackness should know no place, and all should be kept as trim and taut as on a man-of-war. The strain of employing the patients' labour for domestic duties is most felt in beginning a new colony. As time goes on the matron has always two or three on whom she can depend as knowing the ways of the place, and she may sometimes be able to retain a useful patient at very low wage who is glad to remain on for the good of her health and take entire charge of some branch of the work.

"PREVENTABLE BLINDNESS."

REPORT OF THE COMMITTEE

APPOINTED AT THE INTERNATIONAL CONFERENCE ON THE BLIND, HELD AT MANCHESTER IN JULY, 1908.

THE Hon. Secretary of the Committee on Preventable Blindness, Mr. C. M. Collingwood, of Exeter (Superintendent of the West of England Institution for the Blind), has sent the following report to us for publication:—

"The subject of the prevention of the disease which so frequently causes blindness in newly-born infants is one that for many years has engaged the attention of all whose work has brought them into contact with the blind. At every conference that has been held during recent years relative to the welfare of the blind, whether at home or abroad, attention has been called to the urgency for taking satisfactory measures for the checking of this disastrous cause of blindness.

"The medical libraries contain a host of papers and books which have treated of this disease, and of the blindness consequent thereon. Recent English literature has been summarised in the report of the British Medical Association committee (*British Medical Journal*, May 8, 1909), to which reference will be made further. The gist of these papers is to the effect:—(1) That more than one-third of the blindness found in British blind schools is due to this one cause—infants born with good eyes are blinded by the disease within a few days of their birth. (2) The risk of blindness is entirely preventable by prompt and efficient treatment.

"To this end it is now almost universally agreed, by both medical men and laymen cognisant with the subject, that the disease known as 'the ophthalmia of the newborn' should be scheduled as compulsorily notifiable. And it is believed that by such action this appalling source of misery and helplessness would be checked. In spite, however, of these urgent recommendations, no action has been taken by the British Public Health Authorities, nor have these authorities, so far, availed themselves of their permissive powers to make the disease compulsorily notifiable.

"At the International Conference on the Blind, held in Manchester in July, 1908, it was held that no sufficient steps had been taken to give publicity to the urgency of the matter. A representative committee was therefore appointed to consider the subject fully, and to make such recommendations as they might deem not only advisable, but as likely to be of practical utility. At the first meeting of this Committee two ophthalmic surgeons were co-opted as members of, and advisers to, the Committee:—Mr. Robert N. Hartley (Hon. Surgeon, Leeds United Institution for the Blind and Deaf and Dumb), and Mr. N. Bishop Harman (oculist to the London County Council Blind Schools). These gentlemen were expected to advise on matters relating to the North and South of England respectively. During the sittings of this Committee, another committee, instituted by the British Medical Association, has had this same matter under review. The two committees have acted upon quite independent lines, and the fact that they have arrived at similar conclusions, and make virtually the same recommendations, adds greatly to the weight of their recommendations.

"The following are the recommendations of the Committee appointed by the International Conference:—1. That in the opinion of this Committee the adoption by the Public Health Authorities of the Early Notification of Births Act is urgent. 2. That in the opinion of this Committee the disease known as the 'Ophthalmia of the New-Born' should be added to the list of diseases compulsorily notifiable under the powers of the Infectious Diseases (Noti-

fication) Act of 1889. 3. That in the opinion of this Committee:—(a) More definite teaching should be given to midwives on the seriousness of eye disease in children; and (b) they suggest that the Central Midwives Board should issue more stringent instructions on the danger of 'whites' in lying-in women.

"With a view to obtaining more exact knowledge of the incidence of 'blindness' in subsequent census returns, the Committee recommend that the Registrar-General should be requested to define and classify 'blindness' in his schedules in some such way as the following:—1. Stone Blind, i.e. the individual has no power to see the movement of fingers before the eyes. 2. Partially Blind, i.e. in the case of (i.) *Children*. Those who have not sufficient sight (even with the aid of glasses) to be taught in an ordinary school. (ii.) *Adults*. Those who have not sufficient sight (even with the aid of glasses) to earn a living by ordinary means.

"In conclusion, the Committee desire to emphasise the fact that the question is at the present juncture, and is likely to be in the future, of much greater importance than in the past. For the introduction and extension of the operation of the Employers' Liability Act is seriously affecting, and is likely to still more seriously affect, the earning powers of adult workers with defective vision."

The Report is dated June, 1909, and signed by the Chairman, Mr. Henry J. Wilson, and the other eight members of the Committee.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, AUGUST 9 to 14.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

August 9 and 12, Surgical Registrar, Demonstration.

At 12 noon.

August 9, Dr. Bernstein, Pathological Demonstration.

At 3 p.m.

August 9, Mr. Bidwell, Surgical Cases.

August 10, Dr. Pritchard, Medical Cases.

At 5 p.m.

August 11, Mr. Armour, Clinical Lecture.

August 12, Mr. Keetley, Clinical Lecture.

August 13, Dr. Davis, Tonsillitis.

THE Secretary of the Seamen's Hospital Society reports that the summer session of the London School of Tropical Medicine at this hospital has just drawn to a close and that it has been one of the most successful on record. Fifty-one students have taken out the course. The accommodation at the school provides for only forty students in the general laboratory and about five in each of the special departments. With the present classes the school has been much overcrowded. Thanks to the generosity of a friend of the school, the laboratories will be enlarged during the long vacation, and it is hoped that when the school reopens in October there will be sufficient accommodation for all who desire to go through the curriculum, even if they are more numerous than in the present session.

THE HOSPITAL

AUGUST 7, 1909.

Name

Address

This Coupon must accompany manuscript or contributions intended for THE HOSPITAL.

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 129, VOL. V. [No. 1201, VOL. XLVI.]

SATURDAY, AUGUST 14, 1909.

"THE HOSPITAL" COMMISSION AND BEER AND STOUT.

WE have received a copy of "The Literary Digest" containing an article entitled "More about the Nutritive Value of Beer." This article consists essentially of extracts from two other articles criticising the report of THE HOSPITAL Commission upon beer and stout. Each author supports his criticisms by weighty quotations from the writings of physiological chemists. These quotations are for the most part in themselves accurate and true, but robbed of their context and flung haphazard at what the authors assume to be the teaching of THE HOSPITAL Commissioners' report, they can only be described as irrelevant and absurd. The critics above referred to seem to be under the extraordinary impression that our Commissioners recommended beer and stout as a sole article of diet, and thus as a sole source of the energy required by the working individual. It is quite obvious that deductions based upon such a hypothesis would lead only to dietetic results as grotesque as they would be impossible. In their eager fight against this thesis, which they themselves have manufactured purely for the sake of virulent anti-alcoholic polemics, they seem to have entirely lost sight of the main teaching of THE HOSPITAL's report, which essentially was that good beer was a good drink, assuaging thirst, and at the same time supplying nutriment to the body, quite apart from the alcohol it contained. We entirely disagree that any of the authorities named have proved that beer or stout in ordinary dietetic quantity has any injurious effects either *qua* its alcohol or its other constituents, upon the digestive processes *in vivo*. There are some individuals with whom malt liquors do not agree, just as there are others to whom tea is poison, and in whom milk causes marked gastric disturbance. Dr. Kellogg is quite mistaken in supposing that our Commissioners recommended the consumption of a gallon of beer a day, or, indeed, that any of the calories required in ordinary life should be derived from beer. What we did say was that of alcoholic beverages beer and stout were the most nutritive, and that they contained nutriment quite apart from their alcohol. Nobody in their right senses would recommend milk as a sole article of diet to a working individual, although an occasional glass of milk may make an

exceedingly useful addition to many dietaries. Beer is essentially a drink, and is primarily taken for the quenching of thirst; but at the same time those who take beer in dietetic quantities add materially to the calorimetric value of their original diet. We entirely disagree with regard to the indigestibility of the nutritive elements in beer; our observation and experience tell us that the carbohydrates of beer are exceedingly well borne and easily digested by the average individual. As an instance we may mention the value of good stout in women during the period of suckling. We may further remark that our article was not primarily intended for the public, but for the medical profession, before whom we wished to place fact. It is for the medical man who knows the individual to indicate whether to give beer or not, and should he feel justified in recommending beer, the kind to recommend. While we admire the philanthropic élan of our critics, we regret that they should have entirely misinterpreted our report. We have the philanthropist's desire to improve mankind, but this is tempered with the scientist's regard for fact. Whether beer does more moral harm than it does physical good is not the problem we, as a scientific journal, set ourselves to answer. Our problem was to see actually what the ordinary beer was, to discriminate between good and bad, and, finally, to indicate in what way beer could be used for the physical good of the individual. Human beings have to drink something, and the mere fact that a man likes a certain drink is presumptive evidence that that drink is good for him. In beer and stout we have drinks of varying but, generally speaking, low alcoholic strength, and drinks in which the alcohol is by no means the most essential factor. This quality of beer and stout at once differentiate them from distilled spirits, which are practically alcohol pure and simple and can never be made into anything more than dilute alcohol. We entirely object, from the scientific standpoint, to the thesis that because a beverage contains alcohol it is *ipso facto* injurious to health. As we have frequently pointed out elsewhere, many so-called teetotal drinks contain percentages of alcohol of the same order of magnitude as those of beer. The excise authorities of this country rightly recognise that alcohol must occur as a by-product in

the manufacture of certain beverages, and therefore exempt from duty any beverage containing less than 2 per cent. of proof-spirit. The difference between a drink containing 2 per cent. of proof-spirit and one containing 4 per cent. cannot be that between a harmless beverage and a poison, and to speak of light and natural alcoholic beverages which have been consumed by the majority of mankind harmlessly for centuries as poisons, is in our view both unscientific and misleading. Violent and inaccurate terminology of this type will never influence those whose influence is worth obtaining. The real problem for temperance reformers, who have our sincerest sym-

pathy and can always rely upon our constant help, is not to inveigh by such means against every and all class of alcoholic drink, but to teach the public, especially the young, as is being done so conscientiously in France, not only how not to mis-use but also how to use alcoholic beverage. We must conclude this reply to our critics by repeating the words of our report, which really contain the gist of the whole matter, and which escaped criticism because they are indisputable—namely that “beer and stout of proper quality and given in proper doses and in suitable cases, will be found amongst the most useful dietetic and, indeed, medicinal agencies we possess.”

THE MOTIVES PROPER TO THE PHYSICIAN.

If the practice of medicine is not to sink in the regard of all concerned to the position of a mere means of livelihood, its votaries must possess a sufficiency of idealism. To promote this state of affairs is one great object, we take it, of all modern successors to and substitutes for the Hippocratic oath, pledges and admonitions innumerable to which about the latest addition is Professor Cleland's farewell address* to this year's medical graduates of Glasgow University. Wisely enough, the Professor addresses himself not to the flower of his class, but, to use the popular, ungrammatical phrase, to the average man; and his philosophy is much after the style of the stoicism of Marcus Aurelius. You cannot, perhaps, all be brilliant, he says, but you can all be good. To be really good means to most people a struggle—self-abnegation and so forth—and, therefore, Burns' (advised) “firm resolve . . . stalk of earl-hemp in man” is to be earnestly striven after. What constitutes being really good is to give hearty mutual service and thus to fulfil the natural law of the universe. In the application to the medical life some allowance is made for difficulties revealed by modern culture. “Resolution is a quality which, like every other feature, is largely dependent upon heredity, and heredity is not of our own making.” Not far off the reader finds it stated that in the medical profession resolution is especially required, whether to face the sights of the dissecting room or accident ward, to pronounce death sentences, or to refrain from giving placebos or playing to the gallery. Clearly the deduction is that the good doctor, to reverse Ben Jonson's aphorism on the good poet, is born as well as made. Again, there is the necessitarian view of the will to be considered. Altruism, perhaps, is what one may indicate as Professor Cleland's bridge

over these obstacles. The motive of the necessary self-abnegation must be love. In all his work, the noblest type of physician is animated by love—whether of his patients or of noble scientific ends.

We should rather have said the happiness resulting from true discharge of function: and, indeed, here there might (for the address has the fault, the good fault, of being rather short) have well followed a contrast between the working of two great forces concerned in the production of disinterested, worthy medical practitioners. When members of the laity want to speak nicely of our profession they dwell on the beneficence of its work. There is a pleasant implication that the doctor is a man overflowing with the milk of human kindness; almost a suggestion that the best doctor is the most sympathetic one. This is hardly the esoteric view. Sympathy is a quality so greedily laid claim to by quacks as not to be in very high repute in the medical profession; some may remember the performance of a certain music-hall “doctor,” who, his eyes rolling in anguish, would exclaim to an attentive audience that his work exhausted him terribly, but that his abundant consolation lay in the reflection that it was all for the good of others. Undoubtedly the best physicians and surgeons have been those who had naturally the objective and not the subjective outlook, whose pleasure in their work was artistic. Hence, perhaps, the success of the Abernethian manner, for patients, though much deceived at times, can generally recognise outstanding ability. And hence too, maybe, the impression—on a level with that of George Eliot's rustics, who considered it a mark of their lawyer Dempsey's undeniable capacity that he was a dissolute knave—of anti-vivisectionists that a skilful doctor is apt to be cold-blooded and ruthless. This melodramatic conception is much ministered to by the fiction of the cheaper magazines. Unfortunately, it is probable that in other ways as well the conscientious clinician's motives are often misinterpreted.

* *Remarks on Factors at Work in Life. A valedictory address to the Graduates in Medicine and Surgery in the University of Glasgow, July 13, 1909. By John Cleland, M.D., LL.D., D.Sc., F.R.S., Regius Professor of Anatomy.*

ANNOTATIONS.

Fighting Tuberculosis.

WE have already on more than one occasion referred to the excellent work that is being done by the National Association for the Prevention of Consumption and other forms of Tuberculosis, and it is with great pleasure that we draw attention to the continued popularity of the Exhibition recently organised under its auspices. It will be remembered that this display was at first housed in the Art Gallery Whitechapel, where, during a fortnight, it was visited by no fewer than 72,000 people. It is now domiciled at the Imperial International Exhibition (White City), Shepherd's Bush, and was formally opened there on Friday, August 6, by Lord Balfour of Burleigh. In his opening remarks Lord Balfour laid stress on the educational importance and value of the Exhibition, and every member of the profession will cordially endorse his remarks. Such popular displays are of undoubted value, especially when they are so thoroughly organised as this one is, and when the lessons they are designed to teach are so urgently needed by the people. Perhaps on no other subject is public ignorance—we are almost tempted to write public prejudice—so rampant as on this socially and nationally important question of tuberculosis, and it is urgent that the population of our large cities, at least, should be shown plainly and graphically the true state of the case against consumption. This the Association is doing ably and well, and it is gratifying to find that its efforts are meeting with the appreciation they so richly deserve. It has already received enough invitations to show the Exhibition in the various districts of London and the provincial cities to keep it occupied for more than a year. In congratulating the Association on this well merited success of its endeavours in its crusade against a national scourge, we would venture to hope that means might be found for establishing the Exhibition on a permanent basis in London.

Cancer Research.

THE late Mr. Harry Barnato left by will a sum of £250,000 for the purpose of founding some charitable institution in commemoration of his brother, Mr. Barney Barnato, and his nephew, Mr. Woolf Joel, both of whom predeceased him. Mr. Barnato's trustees have now decided, after a very full and careful consideration of the various schemes which have been submitted to them, to apply this money in building, equipping, and endowing an institution for the reception of patients suffering from cancer, a suitable site in Nassau Street, adjoining the Middlesex Hospital especial cancer wards has been procured, and no time will be lost in carrying out the scheme. We understand that the new institution is to be administered, except as regards its finance, in connection with the Middlesex Hospital. We congratulate that institution upon the splendid gift which will certainly, as Mr. Bland Sutton expresses it in the *Times* of Monday last, change for the better the conditions under which the Cancer Investigation Committee has been working during the last few years. Hitherto

the committee has been handicapped not only by lack of funds, but by other disadvantages, and there has been scant opportunity of acquiring the services of highly-skilled specialists to carry out the necessary work. Continental laboratories which devote attention to this difficult and interesting problem have been on a better footing, as in most instances they have State or communal support. The English Committee has done yeoman service, and is likely to do much more important work in the future now that this bequest enables them to labour without being stinted for the necessary funds to carry on their investigations.

The Recent Outbreak of Plague in West Africa.

SOME interesting points regarding the recent outbreak of plague on the West African Gold Coast are presented in Prof. W. J. Simpson's lately published report. The epidemic, it appears, was a large one, no fewer than 344 cases of the disease occurring, 300 of these ending fatally. "In the first outbreak, from January 5 to April 10, there were 302 cases of plague of which 258 proved fatal. The outbreak in Accra was mainly bubonic and associated with a plague-epizootic among rats, but the outbreak in the villages was, with the exception of three cases, entirely pneumonic, and with no mortality or infection of rats. In the second outbreak, from early in May to June 26, there were thirty-five cases of pneumonic plague in the colony, all of which were fatal. There was no rat infection connected with any of these. In the third outbreak, from July 28 to August 17, there were six cases of plague in Accra, all pneumonic and fatal." Over 35,000 preventive inoculations were carried out. Only four inoculated persons were attacked with the disease, all pneumonic; one of these recovered, the others died. Prof. Simpson believes that he frequently observed the arrest of the disease in localities and villages after all the inhabitants were inoculated, even though the pneumonic type of the disease prevailed. The great prevalence of pneumonic cases is interesting, and Prof. Simpson and the other authorities must be warmly congratulated on getting the upper hand of such a widespread infection so rapidly. Rats examined in the laboratory showed two species—(a) *Cricetomys Gambiensis* (water-house) and (b) *Mus decumanus*. No specimens of *Mus rattus* were brought to the laboratory. Dr. Graham, who examined these rodents, found a great variety of parasites on them, and Prof. Simpson thinks the find is important in that the flea alone has hitherto occupied sole attention as the only parasite possibly conveying infection. The disease did not spread to any of the other colonies on the West Coast, which is highly satisfactory. As to how the Gold Coast became infected there does not seem to be any definite evidence, but the importation might, of course, have taken place by rats from ships or steamers calling there. The epidemic may really be a blessing in disguise, as it has called attention to the highly insanitary conditions prevailing in Accra and other West Coast towns, and now it is to be hoped that the Government will see their way, eventually at least, to remedy some of these evils.

MEDICAL OPINION AND MOVEMENT.

DR. TH. GOLDENBERG has conceived a novel method of treating Tuberculous Abscesses by means of setting free the proteolytic ferments contained in the leucocytes. His results are published in the *Münchener Medizinische Wochenschrift*. According to Heile, the good results obtained by injections of iodoform emulsion in glycerine are due to the leucocytosis which they excite. The leucocytes liberating proteolytic ferments into the abscess cavity assist the absorption of the pus, and in this way the cavity is emptied and becomes lined with granulations. Otherwise the tuberculous abscess is poor in leucocytes and in ferments. Acting on this supposition, Jochmann and Bätzner have treated such abscesses by injecting ferments directly into them. Goldenberg has, however, adopted the following means, and claims to have obtained very satisfactory results. He injects into the cavity nucleinate of soda, which excites a considerable local leucocytosis. He then treats the abscess cavity with the x-rays, by which the white corpuscles are destroyed and the ferments liberated within the abscess cavity. Instead of nucleinate of soda he has also used as a chemiotactic a combination of silver salts and albumen with equally satisfactory results.

THERE are many Morbid Conditions in which the keynote is the absence of equilibrium between the food absorbed and the energy expended by the organism. If the quantity of food absorbed is insufficient a condition of marasmus results, whereas an excess leads to obesity or to one of a group of affections characterised by an inert and insufficient metabolism. In the treatment of these last-mentioned affections an endeavour is usually made, either directly or indirectly, to restrict the diet, but rarely to cause an increase in the consumption of energy. In many cases the patients are in a depressed and weakened condition, and are unable to make the psychomotor effort necessary in order to increase their expenditure of energy by muscular work. Reasoning on these lines, Dr. J. Bergonié has attempted to treat such cases, especially rheumatic, gouty, and glycosuric, by causing muscular contractions by means of the electric current. He has given an account of his work at a recent meeting of the Académie des Sciences. He uses an alternating current of 8 to 12 volts, with a frequency of 40 to 100 per second and a strength of 50 milliamperes. He applies the current by means of very large electrodes covering a large portion of the body. By these rhythmic contractions are induced in all the chief muscular portions of the body—arms, thighs, legs, back, and shoulders. They are sufficiently powerful to raise the body, even when weighted at the thighs with 40 kilos. or more, and at the same time they are said to be quite painless. The respiratory exchanges are enormously increased. With the diet remaining the same as was sufficient for equilibrium before treatment, the loss in fatty tissue is rapid, and at the same time the strength and power of resistance to fatigue increase.

AN interesting case of persistent and severe Gastric Crises of tabetic origin cured by section of the posterior roots of the seventh to the tenth dorsal nerves is recorded by Drs. Förster and Küttner in the *Beiträge z. Klinischen Chirurgie*. The case was that of a man aged 47, suffering from tabes dorsalis. In addition to the usual symptoms he developed gastric crises, which became so frequent and lasted so long that the patient did not have more than five or six days' respite from them in the course of a month, and that thanks to a dose of 72 centigrammes of morphia. The crises were accompanied by abundant vomiting to the extent of 1½ litres of mucus, gastric juice, and bile. The authors, in discussing the nature of these gastric crises, point out that they are essentially sensory in origin, the motor manifestations—vomiting, hyper-secretion of mucus and gastric juice, and exaggerated abdominal reflexes being determined in a reflex manner. The sensory nerves of the stomach pass partly by the vagus and partly by the sympathetic—that is by the cardiac plexus, the great splanchnic, and the rami communicantes to the seventh, eighth, and ninth dorsal roots. The cutaneous hyperæsthesia and reflex hyperexcitability of the abdominal muscles accompanying the crises also pointed to these roots as the source of irritation. As the patient had been brought into a state of pronounced cachexia, and his condition was considered critical, he agreed to the operation of division of these posterior dorsal roots. The operation was performed in two stages. At the first operation a laminectomy of the fifth to the tenth dorsal vertebrae was carried out, and bearings taken for the subsequent division of the nerve-roots. This operation was followed by such an exacerbation of the vomiting that the second was undertaken on the eleventh day. The success was immediate and astounding. The pains, nausea, and disgust for food disappeared entirely, and the appetite returned. The patient rapidly put on weight, and continues still to do so, three months after the operation. There persists still some slight intestinal colic, and there is, of course, an area of complete cutaneous anaesthesia from a little below the xiphoid to the umbilicus.

WITH a view to determine the therapeutic properties of Cerium Oxalate, especially in cases of vomiting, Dr. G. Baehr and H. Wessler have carried out a series of experiments with this drug. As cerium oxalate of commerce contains also oxalates of lanthane, thorium, and other compounds, they first examined the drug from the point of view of its toxicity. They find that all these oxalates are quite harmless for dogs, and that the cerium oxalate itself can be given in large doses, as much as 50 grammes, without producing any abnormal symptoms, except an increase in the daily quantity of faeces, which, they remark, may result from the ingestion of any inert powder, if given in sufficiently large doses. In regard to the anti-emetic effect of the drug, they find that it is unable to

arrest the vomiting consequent on the hypodermic injection of apomorphine—that is to say, vomiting of central origin. But, on the other hand, it is quite effectual against vomiting due to a local irritation of the gastric mucous membrane, such as results from the administration of ipecacuanha. The drug, to be efficacious, must, however, be given in large doses, so as to form a sort of covering to the wall of the stomach. These experiments, therefore, controvert the idea that cerium oxalate acts as a sort of sedative to the nervous system, such as would appear to be indicated in cases of vomiting in pregnancy, and this supposition is further negated by the fact that the drug is almost entirely insoluble in the biological fluids, and can therefore only be absorbed in very small quantities. The action of cerium oxalate appears to be purely local and mechanical. The authors show a close analogy in these respects between cerium oxalate and bismuth subnitrate, and think that the former might be used with advantage in such cases in which the subnitrate of bismuth finds more usual employment—that is, in cases of alcoholic gastritis and gastric ulcer—but it must be given in the same doses to be at all effective.

THE dangers which may result from prolonged exposure to currents of high frequency and high tension, such as are necessary in the working of wireless telegraphy, are touched upon by Bellier in the *Archives de Médecine Navale*. Men who constantly manipulate the apparatus for the emission of the Hertzian waves are frequently attacked by visual disturbances with more or less severe conjunctivitis, seemingly the direct result of the electric sparks. At times the conjunctivitis is complicated by keratitis and a resultant corneal opacity. Sometimes, in addition, exposure to the electric flashes causes eczema of the eyelids and wrists. Palpitations of nervous origin have also been recorded. Mayhap further experience will show that these complications do not exhaust the catalogue of diseases to which wireless telegraphy can give rise, but at present the ocular phenomena would seem definitely established. With the object of preserving the eyes from the deleterious action of the chemical and ultra-violet rays, the author is of opinion that blue or preferably yellow-coloured glasses should be served out to all manipulators of these hurtful currents.

DEMELIN, in *le Nord Médical*, publishes an interesting article on the practical Diagnosis of the Engagement of the Fœtus. After calling attention to the neglectful manner in which this subject is treated in most text-books, which rarely define the condition, he proceeds to give his own definition. By the "engagement" he understands the descent of the presenting part from the entry of the true pelvis or superior pelvic strait, to the pelvic floor. Engagement and descent are thus, in his estimation, synonymous terms. In practice it is necessary to be able to recognise when engagement has taken place and the extent to which it has progressed, and the author calls attention to the ways in which these

can be estimated. If examination be carelessly carried out a caput succedaneum descending low down may be mistaken for the presenting part, which may be still lying above the superior pelvic strait. There can be no engagement if the presenting part is mobile, and can be felt at or above the superior strait, as also if the pelvis be empty and there be any difficulty in feeling the presenting part, per vaginam. A useful help in estimating the degree of the engagement is afforded by the "Shoulder-sign," described by Fabre. If a frozen full-term fœtus be cut sagittally, so as to bisect the biparietal and bisacromial diameters, the distances between the point where these diameters are cut and the suboccipital point will be found to be two and five inches respectively. If, therefore, during labour the anterior shoulder of the fœtus be recognised five inches above the symphysis pubis, the lowest part of the head lies at the superior strait. If the shoulder is found three inches above the symphysis the biparietal diameter must lie in the plane of the superior strait. If the shoulder is placed between three and five inches above the joint only a part of the space which separates the suboccipital point from the centre of the biparietal diameter is situated below the superior strait. No doubt these measurements cannot be rigidly applied in all cases, but after allowing for errors due to asynclitism and lateral deviations of the head, they will be found very useful in practice, especially if corroboratory evidence be obtained by a vaginal examination, carried out according to the rules laid down by the author.

IT is reported from the Surgical Society of Paris that a Myxelial Fungus, the *Hemispora stellata* first described by Villemain, may produce lesions that resemble tuberculosis histologically. So apt is one to put down giant-cells as probably tuberculous in origin that one is apt to forget that other conditions than tubercle can produce giant-celled systems also. M. Auvray showed a case in point, having investigated it with great thoroughness to prevent fallacy. The patient was a man suffering from what seemed to be an inflammatory swelling in the neck, beneath the angle of the jaw. It was under the skin, but near the surface, and it had persisted so long that a diagnosis of tuberculous lymphatic gland appeared to be fairly probable. The mass was finally excised and examined microscopically, in addition to which cultures were made from it too. Histologically it could very easily have been mistaken for a tuberculous tissue, presenting well-marked giant cells, surrounded by epithelial cells. The cultivations however yielded no trace of tubercle bacilli, but gave pure growths of *Hemispora stellata*. This is not the first case of the kind reported. It would seem, therefore, that it would be wise, in making a diagnosis of tuberculosis of lymphatic glands, and other tissues, not to rely solely upon the presence of giant-celled systems, but to go a step further and stain sections containing such giant cells for tubercle bacilli which would be brought out by the well-known Ziehl-Neelsen method.

A NEW method of treatment for hydrocele, similar to the old one by injection of iodine, and with which the author claims to have obtained excellent results, is described by Marcozzi in *les Annales des Maladies des Organes Génito-urinaires*. This consists in introducing small fragments of magnesium into the tunica vaginalis after tapping the hydrocele, the irritant action and slow absorption of the metal effecting a cure. The magnesium is first washed in ether and then boiled in distilled water. After puncturing the sac, the cavity is washed out with warm water, and a small quantity of fluid left behind to prevent the walls of the sac from coming into contact with each other. The fragments of the metal, to the extent of a drachm in weight, are then introduced into the sac through the cannula. The water is next removed and the scrotum suspended. At the end of about fourteen days the magnesium will start being absorbed. A cure usually results without pain, swelling, inflammation, or even a rise of temperature.

BAR in the *Concours Médicale* publishes a study of facial paralysis in the new-born. The most frequent cause of the condition is the asymmetrical application of the forceps, but it may result, though this is much less common, from version. Facial paralysis is rarely seen when the blades of the forceps are applied symmetrically, but in difficult labour when one blade grips the forehead and the other lies behind the ear, two lesions are produced and followed frequently by facial palsy. The lesion which causes this complication is in almost all cases that behind the ear where the nerve is crushed at its exit from the stylo-mastoid foramen. Were the frontal lesion the causal agent, convulsions and hemiplegia would almost certainly occur, which is not the case. The paralysis is therefore of peripheral origin, and is one of three kinds, superior, inferior and total, according to whether the superior, inferior, or both peripheral branches are implicated. The inferior branch is most commonly affected because it is the most superficial and injured by slight compression. A deviation of the labial commissure is the result. It is more frequent to meet with injury of both nerves than with that of the superior branch alone. This last is the most grave, but owing to this nerve lying deeper than the inferior branch it will be cured the earlier when both are affected. The presence of a superior palsy is shown by the child keeping one of its eyes open. All three forms of paralysis are due to contusion and compression, and not to section of the nerve. They are therefore transient, and pass off in a few days. In this they differ from the paralysis of the brachial plexus which sometimes follows version, and is due to actual tearing of the nerves as the result of traction on the arm. Since it passes off spontaneously, treatment of facial palsy is usually not needed. The eye must, however, be attended to when the superior branch is affected, and it may at times be necessary to stimulate a paralysis which is passing away very slowly with applications of gentle faradism. The author ends by calling attention to the advantage of the use of forceps over version in difficult cases, seeing that the paralysis

which follows the former is always transient, whereas traction on the arm may lead to permanent injury.

AN interesting case was recently shown at a meeting of the Société de Chirurgie by Legrain, in which the operation of Trephining had been performed on eleven different occasions for various phenomena which resulted from a fall on the head. The first operation was undertaken for the relief of fits of absent-mindedness which sometimes lasted several hours. Other operations followed in due course, when further symptoms of vertigo, and, later, Jacksonian epilepsy, ensued. At first the patient's condition appeared to be improved by the operations, but during the past ten years he has suffered from convulsive seizures and permanent contractures. At the present time the cerebral pulse can be seen beating under the skin covering the opening in the skull, which extends from the left parietal region to the parieto-occipital suture. On coughing, a large cerebral hernia can be seen to form. The patient shows no mental symptoms, but is affected by an incomplete right-sided hemiplegia with permanent contractions, but no changes in sensibility. It is uncertain whether he suffered from epilepsy prior to the accident or not, so that it is impossible to be certain that the Jacksonian epilepsy was the result of trauma, whether from the accident or from the operative interference. The consensus of opinion was that further operative treatment would be of no avail, and it is possible that the patient also was content to do without his twelfth experience of trephining.

AT a recent meeting of the Paris Surgical Society, Chavannaz of Bordeaux showed an interesting case of Intra-peritoneal Myxoma, in a patient of 35 years of age. The patient, who, when first seen, showed a large, ill-defined mass in the right iliac fossa, had for several years past complained of vague abdominal pains, on occasions simulating an attack of sub-acute appendicitis. These occasional attacks, or crises as the author calls them, were attended with obstinate constipation, and an examination of the feces showed small masses of hard dry material almost resembling phosphatic concretions. During the attacks there was no fever. When seen by the surgeon, the patient presented an emaciated, sallow appearance, and a diagnosis of sub-acute appendicitis with adhesions was made. At the operation the mass was found to consist of a much hypertrophied appendix at the base of which lay a fairly large myxomatous nodule. The author thinks that the symptoms were due to the appendix primarily, and traces the source of the trouble to a catarrhal appendicitis. The mucous coat of the appendix was found to be enormously hypertrophied, and the main mass of the tumour was made up of mucoid material, probably derived from the mucosa of the appendix, although the author does not attempt to explain how this mucus got into the peritoneal cavity. The case is to be classed among the rare pseudo-myxomata which are sometimes found intraperitoneally. The patient made an excellent recovery.

HOSPITAL CLINICS.

SOME INTRACRANIAL VASCULAR LESIONS.

By W. LANGDON BROWN, M.A., M.D. Cantab, F.R.C.P.; Physician to the Metropolitan Hospital; Medical Registrar and Demonstrator of Physiology, St. Bartholomew's Hospital.

(Delivered before the Hunterian Society, November 1908.)

It has been frequently observed that remarkable cases, like misfortunes, rarely come singly. Recently I saw within three weeks the following series of intracranial vascular lesions, presenting unusual features. My reason for putting them on record is to call attention to the valuable aid to diagnosis which was afforded by manometric observation of the blood-pressure. It will be noted that, when the other signs appeared to point to a different conclusion from that arrived at by the manometer, events proved that the manometer was right.

RUPTURED INTRACRANIAL ANEURYSM.

This is not a very common cause of cerebral hæmorrhage, yet within a week I had the opportunity of seeing two cases. In his first 800 autopsies at Montreal, Osler met with twelve cases of aneurysm of the cerebral arteries, three of which originated in the anterior communicating. This is a considerably larger proportion than in Newton Pitt's series of nineteen cases of aneurysm of the cerebral arteries out of 9,000 post-mortems.

The first case was under the care of my colleague, Dr. Leonard Williams, at the Metropolitan Hospital. She was a woman of 65, who had been attending the out-patient department for several months, with the usual symptoms of high tension. Her blood-pressure was 220 mm. Under treatment her symptoms gradually abated, and the manometer registered 160 mm. only. One day she brought a friend to the hospital who proved to be suffering from diphtheria. This agitated her very much, and she suddenly fell down and became completely unconscious. Her blood-pressure was now found to have risen to about 245 mm. This sudden rise pointed most strongly to cerebral hæmorrhage, as, indeed, did the other signs. A few hours later she died, without regaining consciousness. Post-mortem a ruptured aneurysm about the size of a pea was found on the anterior communicating artery, and a large quantity of blood extravasated all over the base of the brain. The kidneys were granular, though the heart was natural in size.

The same week I made a post-mortem examination on a man who had been admitted to St. Bartholomew's Hospital under Dr. Norman Moore. He was 41 years old, and had been found unconscious in the street by the police. Soon after he was brought in, violent left-sided convulsions occurred, and he died in a few hours. An exactly similar state of affairs to the last case was found; but in addition to the blood extravasated at the base of the brain, blood had tracked up the right Sylvian fissure, and by its pressure on the motor area had produced the convulsions. The heart was hypertrophied and the kidneys were granular.

As a contrast to these cases I may quote one which I saw under the care of my colleague, Dr. Haig, at the Metropolitan Hospital.

CEREBRAL SOFTENING FOLLOWING CEREBRAL EMBOLISM.

A woman of 40 was admitted for a sudden left hemiplegia. She did not lose consciousness at once, but after a few hours she passed into ingravescent coma. There were signs of mitral stenosis, and the blood-pressure was only 110 mm. The coma became so deep that I wondered whether a secondary hæmorrhage could have occurred from the softened artery subsequently to the obstruction. But in view of the fact that the pressure remained at 110, this seemed to be impossible. She lived for several days without regaining consciousness. At the post-mortem an area of red softening was found in the right lenticular nucleus, involving its posterior three-quarters and the adjacent part of the internal capsule. In the heart the cusps of the mitral valve were fused together, so that the orifice only admitted one finger. There were two small anæmic infarcts in the kidney. In my experience it is unusual for embolism to lead to such profound coma; it is interesting to note that the blood-pressure pointed emphatically to the conclusion that hæmorrhage was not responsible for this.

CEREBRAL HÆMORRHAGE; DELAYED COMA WITH RISING BLOOD-PRESSURE.

This case, admitted to the Metropolitan Hospital under my care, presented several obscure features. The patient, a man of 47, suffered from rheumatic fever at the age of 25. There had been alcoholic excess also. Ten days before admission he complained of numbness in the right foot. This passed off, but on the day of admission he suddenly began to drag his right foot. He tried to say that his foot was getting bad again, but in the middle of the sentence he became aphasic. He was found to have right hemiplegia, and his eyes deviated to the left. The left optic disc was rather swollen, and there was an offensive discharge from his right ear. He had incomplete aphasia, and was unable to protrude his tongue. He was evidently able to understand all that was said to him. No disturbance of sensation could be made out. The reflexes were generally exaggerated, except the epigastric, which were absent. There was incontinence of urine and fæces. The heart's apex was one inch outside the nipple line in the sixth space, and the radial artery was hard and tortuous. The blood-pressure was 225 mm., and the urine contained much albumen.

Had he gradually become comatose in the course of a few hours, there would have been little doubt in the mind of anyone that cerebral hæmorrhage had occurred. But he passed into a condition of cerebral irritation; the temperature rose to 101° F., and the pulse quickened to 132. A blood count showed 17,000 leucocytes, rising to 24,000 the next day. The blood-pressure had risen to 245 mm.

The possibility of some septic complication resulting from the aural discharge was discussed. Yet a cerebral abscess from right-sided otitis media could hardly cause a right hemiplegia, nor could sinus thrombosis. Another possibility was an infective endocarditis, set up by a blood infection from the otitis, which had resulted in a septic infarct in the brain. But this would not explain the high and rising blood-pressure, and a blood culture was sterile, while lumbar puncture merely yielded a straw-coloured fluid containing a few lymphocytes. The sole remaining alternative was that the temperature and the leucocytosis were caused by the otitis, and had no connection with the intracranial lesion. There is a natural aversion to diagnosing two separate conditions if a single one will account for all the symptoms, yet in this case the conclusion was justified by events.

Four days later coma gradually ensued, but so slow was its development that the patient could still understand and try to answer questions nine days after the onset of the hemiplegia. Still more curious was the fact that as he became more comatose the blood-pressure fell, the readings on successive days being 175, 155, 130, 125. The temperature, after reaching 102.4°, fell and was normal for the last week of life. He ultimately died 15 days after the onset of the hemiplegia, being completely comatose for the last four or five days of life.

At the post-mortem the vessels at the base of the brain were found to be slightly atheromatous in places; there was no sign of embolism or thrombosis. No softening or discoloration of the brain was to be seen externally. On section a large hæmatoma, composed of concentrically laminated clot, occupied the left basal ganglia. Only a little of the head of the caudate nucleus remained, the lenticular nucleus, optic thalamus, and adjoining white matter including the whole of the internal capsule, being completely destroyed. The brain substance for about half an inch around the hæmatoma was red and soft. A little discoloured fluid occupied the lateral ventricles, but no large hæmorrhage had taken place into them. The right ear contained some thick yellow pus, and the bone was carious.

The heart weighed 19 ounces; the left ventricle was hypertrophied, the mitral valve was thickened, its cusps adherent, and the orifice quite narrow. A row of small firm vegetations studded the auricular aspect of the valve. The kidneys were typically granular; the heart's blood was sterile.

Had the condition of the mitral valve given rise to a murmur during life, the diagnosis of a septic embolus certainly would have been made. Yet it would have been wrong. The blood must have been extravasated so slowly that clotting barred its passage to the lateral ventricles. In this way coma was delayed until there was a large mass of blood in the basal ganglia, but the increased intracranial pressure still produced its ordinary effect of evoking a rise of general blood-pressure. The final fall of pressure with deepening coma must have been due to the cessation of hæmorrhage and the spread of the softening around.

THE VALUE OF BLOOD-PRESSURE ESTIMATIONS.

The mechanism by which a rise of blood-pressure inevitably follows a cerebral hæmorrhage is clearly demonstrated by Cushing's experiments. Medullary anæmia would mean death, so that the blood-pressure must be kept above the intracranial to prevent this. The slightest degree of anæmia in the medulla throws the vaso-motor centre into increased activity. Cushing raised the intracranial pressure in animals by introducing normal saline solution into the cranial cavity from a pressure-bottle. Until the intracranial pressure reached the level of the blood-pressure very little effect was produced, but at that point the blood-pressure was at once raised until it was again greater than the intracranial. This was repeated with each increase of intracranial pressure until the vaso-motor centre began to show signs of giving way. The absolute necessity of maintaining the blood-pressure at a higher level than the intracranial establishes a vicious circle, for the hæmorrhage produces a rise of pressure and the rise of pressure increases the hæmorrhage. To lower blood-pressure with the view of checking hæmorrhage is to run the risk of producing medullary anæmia, with possibly fatal results, as Leonard Williams has urged. Is there any way of lowering intracranial pressure directly? Then the vaso-motor centre would allow the blood-pressure to fall; this would assist the arrest of hæmorrhage, and the vicious circle would be broken. Lumbar puncture will diminish intracranial tension and has, therefore, been recommended in such cases. It has been thought to be risky, in that it will leave the arteries less supported, and therefore more liable to bleed. My answer to this is that as soon as the intracranial pressure is reduced the blood-pressure will fall, and therefore the liability to hæmorrhage is diminished. That the blood-pressure can be reduced in this way I have had an opportunity of observing recently. A man in whom I had diagnosed cerebral hæmorrhage had a blood-pressure rising from 165 to 210mm. Lumbar puncture withdrew blood-stained cerebrospinal fluid. The pressure fell at once to 175 and then more gradually to 135mm., while consciousness was soon regained.

CEREBRAL THROMBOSIS.

A man aged 64 was admitted under my care with the history that for three months he had suffered from headache; he had become very irritable and easily worried. For a fortnight he had vomited each time he had taken food; for the last two days he had been drowsy and rambling in his speech. There was nothing of importance in his past history except an attack of syphilis at 15. His face was expressionless and he was roused with difficulty. There was no optic neuritis, but some old choroiditis. The eardrums were natural. The heart was slow and feeble, the pulse small; the blood-pressure was 130mm.; the urine was free from albumen. No definite paralysis could be made out, and the reflexes appeared to be normal. Lumbar puncture yielded a clear fluid containing 40 lymphocytes per cubic mm. In view of the long prodromal symptoms, the feeble circulation, and the absence of increased pressure,

the diagnosis of cerebral thrombosis was made. His condition did not improve; there was incontinence of urine and fæces, the drowsiness increased, and the facial muscles became very weak. The blood-pressure remained at 130.

The orthodox treatment in senile cerebral thrombosis is to employ cardiac stimulants. But Grainger Stewart has shown that the fatal issue is often due to a rise of pressure in the stage of reaction, or as a result of this stimulant treatment, which bursts the now softened vessel. Bearing this danger in mind, I have been loath to stimulate in cases of cerebral thrombosis. Recently, however, I have heard this method extolled by a competent authority, and as I felt sure that this patient would die if left alone, I thought that it would be better to run the risk. He was accordingly put on a mixture of nitrous ether, caffeine, and strychnine every six hours, and two ounces of brandy in the day. He did not improve, however, and a week after admission he became very cyanosed; the pulse is recorded as "quite full"; his temperature rose to 102.6, and he died. I did not see him in this stage, and unfortunately no observation of the blood-pressure was made after the pulse changed in character.

The post-mortem revealed an old clot in the torcula herophili, which had spread more recently into the left lateral sinus. There was a large flat hæmatoma over the left cerebral hemisphere; the blood was of a rusty red colour with partly-decoloured clots; internally it was covered by a thin mem-

brane, the dura forming the outer covering. The cyst did not cross the middle line. The superior longitudinal sinus was patent. The left half of the cerebrum showed a well-marked depression corresponding to the cyst. There were a number of small recent hæmorrhages into the pons and crura cerebri. The heart was slightly enlarged and very flabby; the aortic valves were rather atheromatous. The kidneys contained several small cysts and their surface was slightly granular.

This was evidently an example of the so-called hæmatoma of the dura mater, first described by Virchow. It is usually associated with atrophy of the convolutions, as in this case. As might be expected, therefore, it is more common in asylum than in ordinary practice. The failure of the blood-pressure to rise strongly suggests that the formation of the cyst is compensatory to the atrophy of the convolutions, otherwise it must increase the intracranial pressure, which would raise the blood-pressure. I believe that the change in the character of the pulse and the rise of temperature corresponded to the pontine and crural hæmorrhages, and I cannot but suspect that the stimulant treatment must have been at least in part responsible for their occurrence. At any rate the case has impressed on my mind the reality of the dangers pointed out by Grainger Stewart.

In conclusion, I must express my thanks to those who have kindly allowed me to illustrate these remarks from cases under their care.

PARALYSIS AGITANS.

By PURVES STEWART, M.D., F.R.C.P. Physician to Westminster Hospital and to the West End Hospital for Nervous Diseases.

(A Lecture delivered at the Medical Graduates' College and Polyclinic.)

Just as the ancient monuments of Egypt and Greece challenge comparison with any modern buildings, so also Parkinson's description of the disease called by his name—a description published nearly a century ago—remains a model of clinical accuracy and completeness. It is remarkable how little has been added to our knowledge of this malady since its original description in the year 1817. Paralysis agitans, or the "shaking palsy," as Parkinson termed it, is a disease of the central nervous system, whose anatomical substratum is as yet unknown, though the diagnosis can usually be made at a glance.

Look at this typical case in a man aged 51. Observe not only his tremors, but his gait as he walks in, and his posture when he stands still. Notice his bowed head, spiked on, as it were, to his stooping shoulders. See how cautiously he moves along, with short, shuffling steps, and notice particularly that his upper limbs, stiffly fixed at the shoulders, have lost the normal swinging movement of a healthy person, whilst the elbows are held semi-flexed; the wrists slightly dorsi-flexed, and the fingers and thumb in the "interosseal" posture, as in holding a pen, yet constantly trembling in a rhythmic fashion, as if rolling an invisible cigarette. We ask him to turn round, and he does this slowly and all in one piece, as if made of glass. We look at his face and see his staring eyes, their awestruck expression, with hardly a blink of the lids. His whole face

looks stiff and frozen, and there is marked deficiency of facial expression when he speaks. We cover up his mouth while he talks, and see that the upper part of his face is practically immobile—the so-called "Parkinsonian mask." Now we offer him a chair, and notice how slowly and cautiously he sits down. Even when he sits, he seems as if he cannot let himself go, but appears always on the verge of getting up. Meanwhile, his toe rests on the ground, while his ankle trembles, synchronously with his shaking hand. We now ask him to get up again. He does so with great deliberation, and only succeeds after several preliminary failures.

Let us now consider the disease more in detail. As a matter of experience, more than four-fifths of the cases commence after the age of 40. But in exceptional cases the disease may come on in early adult life. I have seen it in a young man of 22, and Duchenne even described a case in a 17-year-old patient. Most cases come on gradually, but in a few the symptoms date from a fright or emotional disturbance. I remember the case of a man who was visiting a menagerie, when a lion broke loose from its cage and caused a panic in the audience: the first symptom of paralysis agitans was noticed next day in the form of stiffness of one leg. I have seen other cases attributed to such incidents as tooth-extraction, cab accidents, emotional shock, etc.; but dramatic incidents like

these are quite exceptional, and I believe that in most cases sudden shock, if it has any influence, merely serves to exaggerate or render evident the disease which was previously latent.

The phenomena of the disease are mainly motor. The most obvious symptom is rhythmic tremor, of moderate speed (3 to 5 per second), more marked in the upper limbs than in the lower, and more marked at the distal than the proximal joints. The typical movement is sometimes limited to the thumb and index, which perform a pill-rolling or cigarette-rolling movement. Then some cases have flexion-extension and abduction-adduction movements of all the fingers, and pronation-supination movements of the hand. The elbow and shoulder joints rarely show tremors, except for a communicated movement from the shaking hand. In the lower limbs the tremor is best marked at the ankle, and is synchronous with the digital tremor. The tremor of paralysis agitans is continuous, commencing a few moments after the patient wakes, and ceasing during sleep. Usually the patient can diminish or stop his tremor for a few seconds, in order to perform a voluntary movement—i.e. threading a needle. I remember a patient in a country village who had the most marked tremors, but if he was invited to console himself with a glass of whisky at the bar of the village hostelry his hand became as steady as a rock. But this rule is not invariable, for in a few cases the tremor is exaggerated by voluntary movement. Practically every case has a characteristic handwriting—slow, tremulous, and with an inclination to write smaller than usual. The lips, tongue, lower jaw, and vocal cords may be tremulous, but the respiratory and trunk muscles do not tremble. But although tremor is a very dramatic phenomenon in the disease, it is not essential. A certain proportion of cases have no tremors at all—so-called “paralysis agitans sine agitatione.” In spite of the absence of tremors, we recognise these cases easily by their characteristic posture and gait, which are due to muscular rigidity.

Muscular rigidity indeed is the most constant of all the signs. We notice it in the limbs, which tend to be semi-flexed, also in the face, as already described, and in the muscles of the trunk and neck. Rigidity is also quite distinct when we move the patient's limbs passively. It causes a considerable degree of bodily discomfort, so that the patient frequently complains of difficulty in finding a comfortable position when lying in bed. Some patients have a peculiar difficulty in getting into bed. They may take several minutes to climb in, and when they have got into bed they feel themselves stiff and helpless. We have seen how slowly the patient turns round; we notice his gait, which tends to the “festinant” type—i.e. the steps become shorter and faster, and the patient may almost topple over, so-called propulsion. Similar appearances may be elicited if we ask the patient to walk backwards, when he tends to fall backwards—so-called retropulsion.

Some ten years ago I described a new symptom, previously unnoticed, which I called the “toe-curling phenomenon.” This consists of a tonic spasm of the toe, usually flexor in type, less frequently extensor, which pulls the patient up when walking,

so that he has to stand still until the toe relaxes. This symptom is often early in appearance, and occurs in about one-fourth of the cases.

However severe the case, there is never any true paralysis, although voluntary movement may be severely hampered by the muscular rigidity. Not only do the patients look downhearted, they also feel downhearted, and in a few cases melancholia may actually supervene.

The patient frequently complains of various subjective sensations, especially a feeling of continual restlessness, hot flushes, etc. Occasionally there is excessive sweating, and sometimes the patient complains of salivation. Salivation, however, may be explained in some cases as due to rigidity of the muscles of deglutition, whereby the saliva is retained a long time in the mouth.

Not infrequently the patient complains of frequency of micturition, and even of enuresis. In one of the patients whom I show you to-day enuresis was the earliest and most persistent symptom: Mr. Thomson Walker, who originally sent him to me, found no abnormality in his urinary tract to account for the symptom, which appears to be part of the nervous malady.

The course of the disease is steadily progressive. The malady does not shorten life, although it takes away much of the joy of living.

PATHOLOGY TREATMENT.

Various theories have been propounded to account for the symptoms, but no constant anatomical changes have yet been demonstrated in the nervous system or elsewhere. And yet there must be a profound molecular disturbance somewhere, probably in the cerebrum. The hemiplegic onset of the disease points, of course, to some spot above the medulla, as the *fons et origo* of the malady. I cannot help feeling that we have to look to the mid-brain for the probable starting-point of the disease. Gross lesions in the neighbourhood of the red nucleus in the dorsal region of the crus cerebri produce rhythmic tremor of the contra-lateral arm and leg, and possibly paralysis agitans is the result of molecular change in that region.

Lastly, as to treatment. We must frankly confess that, although the patient's life is not shortened by the malady, cure is out of the question. The disease belongs to the degenerative group, and steadily becomes worse. But we can do something to alleviate the patient's discomfort. The chief means at our disposal consists in the administration of hyosine in full doses, commencing with gr. 1/200 t.i.d., and cautiously increasing it. A few years ago formic acid was strongly recommended by some French observers, but I found that the remedy, even when greatly diluted, was so bitter that the patients said the cure was worse than the disease. Anyhow, I could not get them to persevere long enough with formic acid to produce any appreciable results. Warm baths and passive movements help to reduce the rigidity, so also does galvanism. Massage is of little use, whilst faradism makes the rigidity worse. Cheerful surroundings and encouraging suggestions also help to alleviate the patient's discomfort, and alleviation is all that we can attempt.

MEDICINE.

THE VACCINE TREATMENT OF PNEUMONIA.

A good deal of work is being done just now upon the vaccine treatment of pneumococcal affections, especially of pneumonia, and practitioners who are not yet familiar with the procedure are beginning to ask how it is done, and what are the results.

It is clear that it is necessary that the diagnosis should be correct; and although it may be relatively easy to determine that the patient is suffering from pneumonia it is much more difficult to be sure that that pneumonia is pneumococcal. It is true that the great majority of ordinary lobar pneumonias in adults are pneumococcal, but there are a sufficient number due to other organisms, such as the influenza bacillus, the pneumo-bacillus of Friedländer, the typhoid bacillus, and even others, to create some doubt in any particular case until cultural methods have proved that it really is the pneumococcus that is at work. Moreover, lobar pneumonia may be simulated by such other conditions as phthisis, subdiaphragmatic abscess, pleurisy with effusion, and so on.

POINTS IN FAVOUR OF VACCINE TREATMENT.

Granted, however, that the pneumonia is pneumococcal, or that the patient is suffering from the continued effects of a pneumococcal sequela of pneumonia, the reports that are being published upon the subject seem to indicate: first, that no harm results from the inoculations if ordinary skill and care are employed in giving them; and, secondly, that the course of the pneumonia is beneficially influenced by them. It would seem natural that the vaccine treatment should be begun as early as possible in each case, and this is strongly urged by those who advocate it at all; it would be unfair to employ every other method of treatment first, and then, simply because the patient was dying, and there seemed nothing else to be done, resort to vaccine treatment *in extremis*. Adopted early, and skilfully employed, it would seem that the vaccine treatment shortens the duration of the illness and increases the chances of recovery. It is important to remember, of course, that there is extreme variability in the virulence of the pneumococcus in different years, and that whereas in some epidemics of pneumonia all the patients recover whatever treatment is adopted, in others a large percentage of them die in spite of all that can be done. The pneumococcic vaccine treatment has yet to stand the test of time and more extended use; we are only giving the summary of the reports to hand so far.

DOSAGE.

As regards the dose, a comparatively small one suits better than a larger one. A usual quantity of vaccine is that which contains the product of 50 million pneumococci; some observers prefer to start with 25 million and increase this in successive doses up to 150 million, or even more. In acute pneu-

monia there is little time for progressive increase of dose, however, so that a vaccine representing 50 million of the cocci is usual here; it is in the chronic empyemata and other pneumococcal sequelæ that larger and larger successive doses can better be employed.

INDEX DETERMINATIONS NOT ESSENTIAL.

Another important question concerns the opsonic index. Is it necessary to determine the latter in order to decide when the dose of vaccine is to be repeated? The answer is "No." Determinations of the opsonic index may be helpful, but they are not essential. Observations of the temperature chart, of the clinical condition of the patient, and of the physical signs afford a sufficient guide in gauging the time when the dose should be repeated. It appears that intervals of four days are by no means too short when doses of 50 million are employed.

Next, as Dr. Butler Harris has recently insisted, chronic empyemata, and other infections of the lung or pleura by the pneumococcus which fail to resolve after an acute pneumonia, as well as pneumococcal lesions in other places, ought certainly to be treated with a pneumococcic vaccine. Slow to improve by themselves, or even stationary or retrograde, these cases seem to afford a very reasonable prospect of success when the patient's powers of anti-microbial reaction are given a fillip in the right direction by the use of the vaccine.

THE ORIGIN OF THE VACCINE.

Finally it may be asked—and it must be admitted that the question is an important one—is it necessary that the patient's own pneumococci be used in preparing the vaccine? The answer is "No." It is true that in the treatment of furunculosis by anti-staphylococcic vaccines a great deal of stress has been laid upon the importance of making the latter from the patient's own organisms and not from stock cultures; such cultures admittedly give the best results in cases depending on streptococcal infection, and in such cases there can be no doubt that it is of the utmost importance to prepare a vaccine from the infecting micro-organism in the patient's tissues itself. Some authorities hold that it is equally important to do so in cases of pneumonia. The most recent opinions, however, seem to be that, provided the pneumococci have not been subcultured several times so as to have lost virulence, it matters little whether they were obtained directly from the patient or not. It is essential that the cultures used should possess a high degree of virulence, and to insure this it is as well to mix together several strains each as virulent as possible. Granted that they are virulent, however, it seems to matter little whence they are derived, and this is a point of considerable practical importance in that all the delay attendant upon cultivating the patient's own pneumococci can be avoided if the diagnosis is pretty obvious without it.

TUBERCULOUS PERITONITIS TREATED WITHOUT OPERATION.

THE first successful operation for tuberculous peritonitis was an accident, for laparotomy was being performed under the idea that the patient was suffering from an ovarian cyst. The case was one of the ascitic type, and when recovery resulted the cure was not unnaturally attributed to the beneficial effect of the laparotomy. This was in the days when it was less clearly realised than it is now that any tuberculous lesion may recover completely under careful advice as to the mode of living and as to the food to eat, and since then our opinions have been considerably modified. Careful hygienic treatment in tuberculous cases has come to be regarded as of the utmost value at least as a preliminary to more radical lines of interference, and the limits of usefulness of operative treatment have been much restricted.

Nevertheless this original case of recovery after laparotomy for tuberculous peritonitis rapidly led the younger school of medical men to suppose that the treatment of all tuberculous peritonitis—or if not of all tuberculous peritonitis, at any rate of that form in which ascites is a prominent feature—is essentially operative. It was not long before those who had access to large numbers of cases came to the conclusion that laparotomy does not do for them anything like the good that is expected.

A DIFFERENCE OF OPINION.

Indeed, both clinical and experimental results show that operative measures in the earlier stages of the disease are positively harmful. Even when all would be agreed that the case before them was one in which an operation should be done, some would advocate simple incision through the abdominal wall and re-suture; others, incision and the letting out of the fluid before re-suture; others, in addition to letting out the fluid, disinfection; some counsel the breaking down of adhesions, others deprecate this; some advise that sunlight should be let in to the peritoneal cavity; there is no unanimity of opinion as to what should be done, so that many have argued that it does not matter what is done so long as simple laparotomy is performed. Others, on the other hand, argue that the cases should for the most part not be operated upon at all.

THE CASE FOR NON-OPERATIVE TREATMENT.

The results of an investigation by Dr. Stone, of the Massachusetts General Hospital, may help us in forming some opinion upon these questions. He traced the subsequent histories of 122 cases, some operated upon and some not, and definitely concluded that operation is not to be advised early, nor indeed until the effects of other treatment have been carefully watched first. He finds that several patients with well-marked ascites begin to improve almost suddenly, and he points out that had these cases been operated upon it is more than probable that the rapid improvement would have been attributed to the operation. If Gelpke's view that the peritoneal exudate contains bactericidal substances is true it would seem to be

decidedly wiser to leave it in the body than to remove it.

SOME NOTEWORTHY CONCLUSIONS.

The general conclusions that can be drawn from Dr. Stone's long paper are as follows:—

First, that the outset and course of the disease are so extremely variable that it must always be a matter of great difficulty to determine whether recovery or the reverse are due to any particular line of treatment that has been followed. There are patients in whom the symptoms are lit up in a sudden and stormy manner, both in ascitic and in non-ascitic cases. On the other hand, the tuberculous peritonitis may seem to have been cured, or even to have been non-existent, and yet it is merely latent so far as symptoms are concerned; it can remain so for months or years and yet light up again, just as in the case of pulmonary phthisis.

Secondly, the source of infection is unknown; it is presumed that the peritoneum becomes infected from the intestine; and therefore from the food—milk, for instance; but this is very difficult to prove; it is noteworthy, however, that Dr. Stone finds none of his cases to have arisen from tuberculous disease of the Fallopian tubes, as some authors think not uncommon, nor from similar disease of the vermiform appendix.

Thirdly, although it has sometimes been stated that tuberculous peritonitis is commoner in girls than in boys—as it would require to be if tuberculous disease of the uterine appendages were its common precursor—Dr. Stone finds that males and females are affected in exactly equal proportions.

Fourthly, it is possible for the ascitic fluid to begin to clear up almost suddenly in cases that have remained stationary for weeks.

A POINT AS TO TREATMENT.

Fifthly, that in the cases with ascites the best treatment is to keep the patient at rest in bed or upon a couch with the fresh air and good food régime that would be adopted in a corresponding case of pulmonary phthisis. Operation should not be advised, at any rate until this course has been followed for at least six or eight weeks, and even then an operation should only be undertaken when there is some distinct indication for it, such as distress from the abdominal distension. In any case, whether laparotomy is performed or not, the mode of life and the dietary need the same careful attention after the arrest of the disease as before it if recurrence is to be prevented.

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SURGERY.

OPERATIONS FOR APPENDICITIS.

In this article it is intended to compare some of the smaller differences in the methods adopted by various surgeons for the removal of the appendix and to discuss their relative merits. First, as to the site of incision in quiescent cases, the so-called "interval appendicectomies," the organ being removed in the interval between the two attacks. The two incisions most in vogue are an oblique one at McBurney's spot and a vertical one at the outer edge of the right rectus abdominis, the muscle being displaced inwards. Before the method of splitting the muscles of the abdominal wall in the direction of their fibres was introduced, there was little to choose between the two. But nowadays such good results are obtained by this method that in the writer's opinion it is the ideal way of opening the abdomen for appendicectomy. It may be claimed for it that a more immediate access to the appendix is given, and in a suitable case, *i.e.* if the abdominal wall is not covered with much fat and the muscles are not hypertrophied, the whole operation can be performed through an incision which is not longer than one and a half inches. One is usually taught to make the incision at the junction of the outer and middle thirds and a line which joins the umbilicus and the right anterior superior iliac spine, the line of the incision being at right angles to this. But it must be remembered that abdomens vary, the outer edge of the rectus being placed further out in some patients than in others. The edge of the rectus can nearly always be defined, and the writer thinks that it is, therefore, better to make an incision in the aforesaid line half way between the edge of the rectus and the iliac spine. This will expose the aponeurosis of the external oblique, its fibres lying parallel to the incision. These are separated and the internal oblique and transversalis are next seen lying at right angles to the line of the incision. These are similarly separated and held aside with retractors by an assistant, a manoeuvre which gives a rectangular exposure through which the peritoneum can be incised and the cæcum and appendix easily brought to the surface. At the end of the operation the wound is sewn up in layers. It is almost impossible for a hernia to result, since the normal structure of the abdominal wall has hardly been deranged at all.

The vertical incision is necessarily longer than the oblique one, since it does not lie immediately over the appendix, and a larger exposure must therefore be obtained. The incision should be made just internal to the outer edge of the rectus and the muscle displaced inwards, after incision of the anterior wall of its sheath. The wound is sewn up in layers, and it follows that when the rectus falls back into its place the opening is closed by a sort of valvular apparatus, so that a hernia is unlikely to ensue. This is a much better method than going through the fibres of the rectus muscle itself.

The disadvantages of the method are the size of the wound that is necessary, and the fact that there may

be some difficulty in bringing the appendix into the field of operation, especially if it lies retrocæcally. On the other hand, it is of extreme value in cases in which the diagnosis is not absolute; and this is often the case in women.

The great advantage of the vertical incision in such a case is that it can be easily enlarged downwards, so as to expose the pelvic viscera, while this cannot be done in the muscle-splitting operation.

Secondly, as to the actual method of dealing with the stump of the appendix after cutting the meso-appendix and ligaturing the vessels in it. Here again there are many small differences of technique among surgeons. The commonest method is to turn down a collar of the peritoneal coat and to bring it together over the base of the appendix. This takes a little time, and the writer prefers simply to ligature the appendix, serous coat and all, at its base, and then to invaginate the stump with two or three Lembert sutures, which pass through the serous and muscular coat of the cæcum. All that is claimed for this is that it can be done in less time than it takes to turn down a peritoneal cuff. After all, the great point is to be sure that the entire appendix has been removed.

Whichever method is adopted the stump of the appendix is shut off in peritoneal surroundings, and it therefore seems unnecessary to touch the stump with pure carbolic acid or any other powerful antiseptic. Quiescent cases do uniformly well without this, and on general principles it is inexpedient to introduce strong chemicals into the peritoneal cavity.

Coming to the operation in the acute stage, when an abscess is present, many surgeons make a great point of packing off the rest of the peritoneal cavity with gauze before opening the abscess, the idea being that if any pus were allowed to escape general peritonitis would supervene. But even if pus did escape it is unlikely that this would ensue, since the peritoneum has already walled off one abscess, and is therefore in a high state of resistance to the bacillus coli. It cannot be said that this packing with gauze does any harm, but it is difficult to see how it does any good; because it is a practical impossibility to shut off the peritoneum so completely by this means that not a single drop of pus can escape. All that is necessary is to break down the wall of the abscess carefully and remove the pus as it escapes by means of a series of swabs held in forceps. Too little faith is reposed in the natural power of the peritoneum to resist infection. It is really the best friend of the surgeon. The same argument can be used against those who hold that it is highly dangerous to search for an appendix in an abscess cavity lest the wall of the cavity is ruptured and peritonitis follow. Peritonitis will not follow in a peritoneum which is in a high state of reaction. The worst that can happen is that a second remote abscess may form; and this is almost preferable to leaving a diseased appendix in the abdomen.

GYNÆCOLOGY.

THE PATHOLOGICAL CHANGES WHICH MAY OCCUR IN UTERINE FIBROIDS—(continued).

INFECTION of a uterine fibroid is always a serious matter, and under some circumstances may be a direct menace to life. It is fortunate that interstitial fibroids are not easily infected, but even this occurs sometimes. Commonly, however, it is a submucous fibroid being extruded by uterine contractions through the os uteri, or a pedunculated fibroid projecting into the vagina, which becomes infected. Infection is more easily brought about when the fibroid projects into the vagina for several reasons. First, the bacteria are at hand there and are helped to grow by the presence of unusual secretions set up by the irritation of the fibroid; secondly, the pedunculated fibroid is subject to injury in the vagina; and, thirdly, it is liable to become constricted at its base and partially strangulated. When a fibroid thus becomes infected it is quite common for a patch of gangrene to occur on the surface, surrounded by a hyperæmic zone, and giving rise to a most offensive discharge. The gangrenous process need not even be limited, but may spread to a large area of the tumour with gradual disintegration and the formation of a ragged sloughing cavity. This condition is always accompanied by pyrexia and some general toxæmia, the degree depending on the severity of the gangrenous process.

Interstitial fibroids become infected in two ways commonly; either from the uterine cavity after a labour in which the uterus has been infected, or from the intestines when adhesions have occurred between the latter and the uterus. In either of these cases the infective process is liable to give rise to pus formation in and around the tumour and local peritoneal infection with abscesses may occur as well. In such conditions the general symptoms are very severe, resembling a true septicæmia, but as a rule not ending fatally if drainage can be established and the infected tumour removed. There are several cases on record in which the tumour has been extruded into the uterine cavity, become quite detached by the suppurative process, and expelled into the vagina.

The general treatment of infected fibroids must be complete removal, and as a rule when the tumour hangs into the vagina this is not a very serious matter. When, however, the tumour is only beginning to be extruded from the uterus and has to be enucleated through the dilated cervix, precautions must be taken so as not to infect the bed from which it is removed. It is best to cut away the gangrenous portions first with scissors and forceps, and then to disinfect the raw surface with the actual cautery and the surrounding parts with ether soap, followed by a strong lysol solution thoroughly scrubbed over the parts with sterile absorbent wool. After enucleation of such tumours the uterine cavity should be well washed out and finally plugged with 10 per cent. iodoform gauze which has been soaked in an antiseptic. If the projecting tumour is only one of several, a hysterectomy becomes necessary, and great care must be taken to prevent infection of the peritoneum during the operation. The best plan will be to cut away the gan-

grenous area per vaginam, and then disinfect the vagina and cervix with ether soap and lysol prior to the abdominal hysterectomy. In such cases it is better to perform pan-hysterectomy and drain the peritoneum per vaginam, rather than leave the cervix behind, which will be difficult to disinfect or drain completely.

Calcification of uterine fibroids is liable to occur in comparatively small tumours, generally in elderly women past the menopause. They are often found in the post-mortem room, having caused no symptoms or having been forgotten. However, they sometimes give rise to great pain, partly on account of their weight, of pressure on surrounding organs, or of their unyielding consistence. In these circumstances they sometimes call for removal; the operation of hysterectomy under such circumstances provides no particular difficulties. There is no reason known for the calcification of these tumours, but it may be remembered that calcareous changes are liable to occur in all tumours which are largely fibrous in nature. For instance, it is not uncommonly seen in fibroma of the ovary, and there is some reason to believe that the change is associated with deficient blood supply and possibly with partial torsion of the pedicle.

Sarcomatous degeneration is the most debated degeneration which has been described in connection with fibroids, and there are very few cases of the kind which cannot be viewed with suspicion. Strictly, the term means the transformation of the muscle cells or fibrous tissue in a fibroid into sarcomatous elements. This actual change can very seldom be demonstrated, but it has been claimed to have been seen by some observers, and on the whole we have not enough evidence to say that it does not occur. The more common condition demonstrable, however, is a large tumour, obviously malignant, because it has invaded organs outside the uterus in which masses of tissue occur which are clearly fibromyomatous and other masses which are as clearly sarcomatous. As a rule, however, it is not possible to trace the transition of the one to the other. It must not be forgotten that a sarcoma may arise independently in a uterus which is already the seat of fibroids, either in the muscular wall of the uterus or in the endometrium. From either of these situations the malignant growth may attack and more or less destroy a fibroid without in any way being a degeneration of it. It is possible, too, that a sarcoma may actually arise in a fibroid without being a degeneration of it, but this is much more difficult of proof. Finally it cannot be denied that some sarcomata are of very slow growth at first and may be mistaken for fibroids. Sarcoma in association with fibroids can only be surmised on account of rapid growth, grave constant hæmorrhage, pain and emaciation. Under these circumstances a radical operation is necessary, and the whole uterus and cervix should be removed.

MEDICO-LEGAL POINTS.

SOME GENERAL ASPECTS OF POISONS—II.

A PERSON is supposed to be poisoned if, being in perfect health, he is attacked, after having taken some food or drink, with violent pain, cramp in the stomach, nausea, vomiting, convulsive action, and a sense of suffocation; or, if he is seized, under the same circumstances, with vertigo, giddiness, delirium, or unusual drowsiness. All these symptoms may, however, be the effect of sudden illness, and the examiner should therefore consider the possibility of the existence of some disease which would explain the symptoms. He should inquire into the patient's strength, mode of life, and habit of body, and ascertain whether he had previously complained of ill health, the time at which the noxious substance was taken and the vehicle in which it was given, the taste or odour that was perceived on its administration, and the food or drink that has been lately swallowed, and all subjects that require particular notice.

Taking the mineral acids as the purest examples of poisons that act independently of absorption through the blood, it will be seen on inquiry that all the symptoms they produce, in addition to the direct effects of the local injury, are those of shock, great feebleness, fainting, imperceptible pulse, cold extremities. With respect to the more numerous class which act remotely through the medium of the blood, some certainly possess a very extended influence over the great organs of the body; but the greater number are much more limited in their sphere of action. Some act chiefly by enfeebling or paralysing the heart, others principally by obstructing the pulmonary capillaries, others by obstructing the capillaries of the general system, others by stimulating or depressing the functions of the brain or of the spinal cord.

Till the close of the eighteenth century it was the custom to decide questions of poisoning from the symptoms only. In fact, up to that time no other evidence was accounted so infallible; and for this simple reason, that in reality the other branches of evidence were even more imperfectly understood. As late as 1760 the solemn opinions of whole colleges were sometimes grounded almost exclusively on the symptoms. About that time, however, doubts began to be entertained of the infallibility of such evidence. These doubts have since assumed gradually a more substantial form; and it is now laid down by all authors in medical jurisprudence that the symptoms, however exquisitely developed, can never justify an opinion in favour of more than high probability.

Having formed an opinion that a poisonous substance has been taken, the next question that arises is to what class it belongs. Some of them act instantaneously, and the effects of most of them are in general fully developed within an hour, or little more. But this character is by no means uniform. The most violent may be made to act, so as to bring on their peculiar symptoms slowly, or even by imperceptible degrees. Thus arsenic, which usually causes violent symptoms from the very beginning, may be so administered as to occasion at first nothing more than slight nausea and general feebleness, and after-

wards in slow succession its more customary effects. In like manner corrosive sublimate may be given in such a way as to cause at first mild salivation, and finally gangrene of the mouth. Nevertheless, it still remains true, that the effects of poisons for the most part begin suddenly, when the dose is large. This is an important circumstance in regard to certain active poisons. For when it is considered that in criminal cases they are given for the most part in unnecessarily large doses, it follows that, if the effect ascribed to these poisons in such doses have not begun suddenly, the suspicion is probably incorrect. The same remarks may be applied to the sudden termination of the symptoms. Poison is for the most part given criminally in doses so large that it proves rapidly fatal. Yet this is not always the case: the diseased state occasioned by poisons has often been prolonged for several weeks, sometimes for several months; nay, a person may be carried off by a malady the seeds of which have been sown by the operation of poison years before.

We may suppose that an irritant poison has been taken if the patient has observed that the food or drink which was its vehicle had not its ordinary taste; if he has felt a heat, an irritation, or an extraordinary and sudden dryness at the root of the mouth, and œsophagus, with a constriction or sense of strangling in those parts; if this be succeeded by an obstinate anxiety to vomit, and sharp pains in the stomach and intestines; if there be great thirst, copious discharges, by vomiting and by stool, accompanied with tenesmus, and followed by hiccough, by a sense of constriction across the diaphragm, a difficulty of breathing; if there be great pain in the region of the kidneys, followed by strangury; if convulsions, cramp of the hands, trembling of the lips, extinction of the voice, repeated faintings, cold sweats, and a small and irregular pulse be present; and if, in addition to all these, the intellectual faculties remain perfect, until the disease arrives near its fatal termination.

A narcotic poison, on the other hand, produces the following effects: stupor, numbness, a great inclination to sleep, coldness and stiffness of the extremities, a cold sweat of a foetid or greasy nature, swelling of the neck and face, protrusion of the eye, with a haggard cast of countenance, thickening of the tongue, frequent vertigo, weakened eyesight or objects presented to it in a fantastic manner, coma, delirium, general debility, palpitation of the heart, the pulse at first full and strong but afterwards unequal and intermittent, paralysis of the lower extremities, retraction of the lips, general swelling of the body, and dilatation of the veins. At the conclusion of the disease, slight convulsions and pain are sometimes present. The narcotico-acrid poisons are distinguished by a combination of several of the above symptoms.

In general terms it may be said, in cases where there are no marks of personal violence upon the body of the deceased, and the history of the symptoms can hardly, in the opinion of a

competent medical practitioner, explain a sudden and suspicious death as attributable to natural causes, there is reason to suppose that the deceased came to his death either from some accident, whose pathological effects can be shown at the autopsy, or else by means of some poison which has been absorbed. The object of the medical expert here, as in all other attempts upon the health or life of an individual, is to determine in a precise manner the nature of the disease or cause of death; but, in the majority of crimes, the expert who is called upon to investigate these causes may not begin his examination for weeks or months after the commission of the deed, and until suspicions have led to judicial interference; hence the natural difficulties are greatly enhanced. The great difficulties connected with the discovery or determination of the nature of the symptoms which have preceded the death are hampered by the unwillingness and ignorance of those who witnessed the symptoms; and the fact that a great number of poisons cause symptoms that are almost identical in character, and similar to those of many diseases. On the other hand, the symptoms following the absorption of some of the poisons are very similar, and it may be extremely difficult to determine by the history preceding death that a certain drug had been administered.

To the practitioner the diagnosis of a case of poisoning is of great importance, as by mistaking the symptoms produced by a poison for those arising from natural disease, he may omit to employ the remedial measures which have been found efficacious in counteracting its effects, and thus lead to the certain death of the patient. To a medical jurist a correct knowledge of the symptoms furnishes the chief evidence of poisoning in those cases in which persons are charged with the malicious and unlawful administration of poison.

ARSENIC.

The quantity of arsenic that may be present in the contents of the stomach and intestines is very large. It is very common for the defence to insist that, in a case of supposed arsenic poisoning, unless full fatal doses of arsenic are found absorbed in the system, the prosecution has failed to prove the cause of death.

When, however, the arsenic extracted is in weighable quantities, and in such a form that it can be isolated and shown to the jury, and when the care shown by the analyst and his previous reputation make it reasonably certain that the arsenic in question came from the cadaver, it is perfectly proper to insist that quite minute quantities of the poison furnish very strong evidence of the cause of death. Indeed, the best experts are agreed that in perfectly well-defined cases of arsenic poisoning it is not only not uncommon to find but small amounts of the poison, but it may easily happen that no arsenic at all may remain in the system. When arsenic is taken into the system through the stomach, but a short time elapses before nature endeavours by constant and thorough vomiting, and subsequently by purging, to expel the poison before too much has entered the circulation. That this is frequently successful is

well known from the numerous instances of persons who have taken large doses and recovered without special treatment. The poison that is absorbed enters the portal circulation, and is stopped by the liver, which retains as much of the arsenic as possible. The poison begins to be stored up in the liver probably in a few minutes, if not seconds, after it is absorbed, and gradually increases in quantity for some fifteen or twenty hours. But from the time it enters the system until it is entirely removed, or death intervenes, active agencies are at work to eliminate it from the body. The most important of these is the kidneys, which begin their work almost at once. Besides this the arsenic is excreted through the bile, the skin, and probably, after some little time, at least, through the large intestine. So it is perfectly evident that if the patient does not die for some time the amount of arsenic present in the system must be diminishing every day.

Generally a dose of from one-third to one-half a grain, taken in a soluble form, will produce symptoms of vomiting and other gastric trouble; and from three to four grains of white arsenic are usually enough to produce death. But in certain parts of the world, notably in Lower Austria and in Styria, and also in the Punjab in India, people exist who have trained themselves to eat with impunity, at more or less regular intervals, arsenic in considerable quantities. These facts have been set up by the defences in almost every important arsenic case of late years, to explain the presence of small quantities of arsenic in the body of the victim. A notable example took place in the famous Maybrick trial in Liverpool, 1889. On this occasion, besides several corroborating circumstances, such as a well-proven inducement for the crime, the agreement of the symptoms and post-mortem appearance of the body with those of arsenic poison, and the consensus of all the physicians in attendance on Mr. Maybrick some two days before his death, that he was being poisoned, there were three points of vital importance to the defence which had to be explained in order to save the defendant. These were, first, the presence of arsenic, although in small quantities, in the liver and intestines of Mr. Maybrick; secondly, the presence of arsenic in large quantities and in numerous forms either in Mrs. Maybrick's room or in articles belonging to her, or to which she had free access; thirdly, that after suspicions had been aroused and food proven free from arsenic had been provided for the patient, a nurse saw Mrs. Maybrick enter her husband's room, secretly take a bottle of beef extract from the room, and bring it back and replace it in the room in a few minutes full of arsenic. The defence claimed, first, that Mr. Maybrick was an arsenic eater. This was supposed on some rather slight evidence. Secondly, that Mrs. Maybrick used the various solutions of arsenic, the extracts of arsenical fly-papers, and the packages of rat poison, white arsenic, and the rest which were in her possession as cosmetics. And, thirdly, Mrs. Maybrick stated that, remembering a white powder which her husband was in the habit of using, she had, at his request, put a teaspoonful of it into the beef extract. These explanations were of more effect upon the outside public than on the jury.

THE ROYAL ARMY MEDICAL CORPS SECTION.

THE TERRITORIAL BRIGADE CAMP HOSPITALS.

THE old Volunteer Force had in its organisation advanced to the stage of being formed into brigades, each of which had its own definite staff, and was made more or less complete within itself. For its medical and surgical needs it had its brigade surgeon, its regimental medical officers and regimental stretcher-bearers; while, in addition, there was attached to it a brigade bearer company, which was part of the R.A.M.C. (V.), and wore its uniform. With the advent of the Territorial Army, and its differently arranged medical service, the brigade surgeon and the brigade bearer company have passed away, and medical assistance is now rendered by (1) an improved regimental system, and (2) by a field ambulance. One of these latter is attached to each brigade, while each of the four regiments forming the brigade has its two medical officers, its stretcher-bearers (handsmen), its sanitary detachment numbering eight men, and its five water-duty men from the R.A.M.C. (T.F.).

In previous articles the duties of the Territorial regimental surgeon have been fully described both as regards the first-aid and sanitary instruction he is expected to give to his stretcher-bearers, his sanitary detachment, and to some extent to the water-duty men, and also as regards the annual camp. On all these matters full information has been given, and if his unit was to hold a regimental camp of its own he should have no difficulty in providing himself with all the medical and surgical equipment he is entitled to for dealing with the sick and injured during the regiment's stay in camp. When, however, his regiment encamps as part of a brigade, there arises a condition of matters that is somewhat confusing in view of the disappearance of the brigade surgeon of former days and the existence of the field ambulance now attached to each brigade. It is in connection with the latter that the confusion mainly arises, for the conclusion is very naturally come to that its duty is to take care of the sick and injured in camp. This is not the case. A field ambulance belonging to a brigade is, as its name implies, for field work, and its formation and scope of work have been so arranged that its leading features are mobility and its preparedness to go out with its brigade at the shortest notice. This it could not do if its tent division was filled with the sick and injured of a brigade camp. Such a condition of matters would hamper its mobility, and if it did take the field it would do so in a defective and crippled condition, the result of transgressing the fundamental principle that every unit should confine itself to its own duties and not take up those of another unit. If it does so, there follows confusion and inefficiency. In the medical service of the Regular Army, as, for instance, in connection with the expeditionary force, provision has been made for the freeing of the field ambulances of their sick and wounded by the establishment of what are known as "clearing hospitals." Of these we hope

to speak in a future article; but it may be mentioned here that as yet they have no place in the Territorial medical service. But the military authorities recognise that even in peace time the exact rôle of the field ambulance must be respected, and that, as they go to the annual camp for acquiring a knowledge of field work, their only opportunity for perfecting themselves in that must not be hampered by throwing on them the care of the sick and injured in brigade camps, and that there must be some provision made for relieving them at once of any casualties that they may have dealt with when out with their brigade on a field day or manoeuvres. At places where no military hospital is available, this provision takes the form of a camp hospital, the equipment for which is laid down in Table XI. of the Regulations for the equipment of the Army. This, it must be understood is in excess of, or rather in addition to the regimental equipment drawn by the regimental officer for his unit. Each regiment takes into a brigade camp its own medical and surgical equipment, but in addition to this there is drawn in accordance with Appendix II. Territorial Regulations the equipment of the Brigade Hospital mentioned above. This is done by the brigade-major under brigade arrangements, and on the scale laid down by regulation. Reference to Table XI. shows a detailed list of all the articles furnished, so that there is no need to enumerate them here. It will be seen that there is one circular linen tent to serve as a dispensary, and a small hospital marquee capable of holding ten field-service bedsteads for the accommodation of the sick. All these articles that go to make up the furnishing of the hospital are grouped under the heading of Ordnance equipment, and are indented for by the brigade-major on Army Form G, 968. There is, however, some medical and surgical equipment required, and to understand how this is obtained it is necessary to explain the procedure followed for forming a working staff for this Brigade Hospital. This is done by making the senior of the four regimental surgeons the senior medical officer (S.M.O.) of the camp, and he automatically takes charge of the Brigade Hospital, arranging for its working, and being responsible for the patients in it. Before the assembling of the camp this regimental medical officer should receive notice of his appointment as S.M.O., and it is he who will require to indent for the brigade medical and surgical equipment on Army Form I, 1209, which he will forward properly filled up and signed to the A.M.O. of his Division. The articles allowed are: one medical-companion and water-bottle, four surgical haversacks and water-bottles, one pair of field medical panniers, one No. 1 field fracture box, one stomach pump, and one set of tooth instruments. In addition the Brigade Hospital is also supplied with ten woollen belts, an admission and discharge book (Army Book 27), a diary or ward book (Army Book 39), and with two Mark II. panniers filled with medical comforts; but these last

are not applied for by the S.M.O. They come as part of the hospital equipment requisitioned by the brigade-major.

It is upon the S.M.O. that the duty will devolve of making all the necessary arrangements for the carrying on of the work of the Brigade Hospital. To assist him he will have at his disposal the medical officers of the other regiments of the brigade, and a certain number of men to act as nursing orderlies. There is a difficulty as to the source of supply of these latter, as the stretcher-bearers (bandsmen) or the regimental sanitary men are neither available nor qualified, while regulations prevent the employment of paid men from the St. John's or the St. Andrew's Ambulance Associations. Under those circumstances recourse may be had to the water-duty men and a certain number of

them detailed for hospital work. A Brigade Hospital being a non-dieted one, patients get their food sent in by their respective companies; but the S.M.O. can always order medical comforts from the special panniers supplied, and, as a rule, in camp no difficulty is experienced in arranging for soup or other extras being obtained from the officers' mess of a patient's regiment. At the end of the camp the S.M.O. must take care that all his equipment is safely packed and returned with the vouchers signed. Seeing that an ambulance wagon is usually furnished to each camp, and that regimental medical officers can replenish at the Brigade Hospital any medical stores that run short, all the requirements of the sick and injured in a brigade camp seem amply provided for.

THERAPEUTICS.

ORGANIC IRON COMPOUNDS.

Ferratin.—This is an artificially-prepared substance containing iron in combination with an organic acid, and is said to resemble in composition a natural compound of iron and protein isolated by Schmiedeberg and Marfori from the pig's liver. Its iron-content amounts to 6 per cent. The solution of ferratin called ferratose is a dark brown fluid, the taste of which is not unpleasant. Its composition is ferratin, glycerine, alcohol, and angostura, made up with distilled water; one tablespoonful contains .75 grain iron. The ordinary three doses daily therefore correspond to about 2 grains. The indication for the use of this compound is anæmia, either primary or secondary. It has been somewhat extensively used on the Continent, where the advantage of giving iron in the form of an organic compound seems very generally recognised.

Triferrin is known as paranucleinate of iron, and is prepared by precipitating the organic phosphorus compound obtained from a pepsin digest of casein. It is thus iron combined with a form of phosphoprotein or pseudonuclein. It contains—

Nitrogen	...	...	...	9 per cent.
Phosphorus	...	...	...	2.5 per cent.
Fe ₂ O ₃	...	...	...	22 per cent.

It is insoluble in weak hydrochloric acid, and is thus unacted on by gastric digestion; in the small intestine, however, it is readily dissolved by the alkaline medium. Clinical observations show that triferrin is very well tolerated by persons with weak digestion. The usual dose is 4½ grains thrice daily. Tablets containing this amount and flavoured with chocolate are on the market, and are prepared by Messrs. Knoll and Co.

Ferropyrin is a compound of perchloride of iron with antipyrin, and is an orange-red powder, forming a red solution in five parts of water. It may be employed in place of the ordinary tinct. ferri perchloridi, both externally and internally. The advantages of this preparation are that it is more powerfully hæmostatic, is not caustic, and does not clog the wound or dressings. It may also be found of value in hæmorrhage from the gums after extractions and in gastric and intestinal bleeding.

For gastric conditions the following formula may be employed:—

R ^x	Ferropyrini	...	...	...	gr. 15
	Syr. aurant	...	...	...	3ij.
	Aq. ad	...	...	...	3iv.
	Ft. mist.				

Sig. : One half at once, the remainder in two hours.

In chlorosis it is said to be particularly useful in cases complicated by dyspepsia and neuralgia, where the anodyne properties of the antipyrin are needed.

It is well absorbed, and may be given thus:—

R ^x	Ferropyrini	...	...	...	gr. 10
	Acidi hydrochlor. dil.	...	...	...	℥iv.
	Glycerini pepsini	...	...	...	3j.
	Aq. ad	...	...	...	3vij.
	Ft. mist.				

Sig. : 3ss. thrice daily after food.

Ferropyrin is prepared by Knoll and Co.

Iron somatose consists of the albumoses derived from beef in somewhat firm chemical combination with iron. The latter is intended to influence the blood, whilst the somatose has nutritive properties and is a stimulant to gastric digestion. Iron somatose is a light brown, nearly tasteless, and odourless powder, dissolving readily in water. It contains 2 per cent. of iron, which is not separated by the action of dilute acids in the stomach. It has no disturbing action on digestion, can be taken for long periods, and is well tolerated by children. It does not blacken the teeth, and is not constipating. Improvement of appetite and increase in weight are observed to occur rapidly. It is indicated in all conditions for which iron is usually given. As to the method of administration, iron somatose is best given in small divided doses, as these are more thoroughly assimilated. The powder must invariably be dissolved, and the solution may be added to milk, hot soup or beef-tea, cocoa, white wine or beer. It should not be mixed with tea, coffee, or red wine, as the contained tannin precipitates the albumoses. The solution should be prepared by making the powder first into a thin paste, and then stirring in hot water, or the powder may be sprinkled on the surface of the fluid and left to stand until complete solution has taken place. One to two teaspoonfuls per diem in divided doses represent .2 to .3 gram of iron, or nine to ten Blaud's pills. Iron somatose is prepared by Messrs. Bayer and Co.

MOTERING NOTES.

SPEEDOMETER AND CONSUMETER.

THE value of a reliable speed indicator is apparent, and what no doubt weighs most with the average motorist is its value as evidence in police-court cases. It is well, therefore, when purchasing an instrument of this sort to choose an indicator which is regularly accepted as evidence by the magistrates. In this respect the position of Smith's Perfect Speed Indicator is unassailable, as the record of the week ending June 26 alone so clearly proves. In five cases during that week the Perfect Speed Indicator was called upon to give evidence, with the result that four of the summonses were dismissed. But apart from this very apparent value the speed indicator is useful in many ways. It enables the mere novice to become an expert in changing his speed at the correct moment, and it also informs him exactly how his engine is running by the speed obtained on the various gears. An entirely new use for the speed indicator, however, arises with the introduction of S. Smith and Son's consumeter or petrol-meter. This most indispensable accessory interposed in any position between the tank and the carburettor indicates (1) the total consumption in quarts and tenths of pints; (2) the actual consumption on any trip; (3) the amount in the tank. The latter two are recorded in gallons and quarters of a gallon, and are set from a small knob at the top of the case. It is, by means of a stop-watch, quite easy

to ascertain at any moment the exact rate of consumption by taking the duration of time for any tenth of a pint; by means of a small slide-rule supplied with the instrument the consumption in pints per hour is shown, and by comparison with the speed per hour and a simple calculation the consumption in miles per gallon is arrived at. It is now, therefore, possible to take observations, if necessary, several times in one minute giving the actual ratio consumption of a car under all varying conditions of speed, load, and road gradients, and by this means to learn the actual power developed by the engine under these circumstances. The consumeter is not a toy, but an instrument of precision which enables a car-owner to know positively the most economic engine and road speeds for driving, to assure the correct proportions of air and petrol for the formation of a perfectly combustible mixture. Thus over-heating is avoided, and carbon deposits in the cylinders or the ejection of noisy and noxious gases in the exhaust are also obviated, while a check is kept upon the consumption and waste is prevented.

These two instruments, therefore, are worthy of every motorist's attention and consideration, and are really necessary if he wishes to bring up and maintain his car in a high state of mechanical efficiency.

PRACTICAL HINTS.

LEAKING WATER-COOLING SYSTEM.

An excellent method of repairing a leak in pipes or joints in the water-cooling system of a petrol-motor is to bind round the part leaking a length of string that has previously been soaked in oil. A very satisfactory temporary repair can be effected in this way. The string should first be soaked in oil—linseed for preference. Failing this, thick lubricating oil can be used, and the string should be wound round the joint with the coils kept as close together as possible. The start and finish of the coil should be some little distance on each side of the point at which the leak occurs. The winding should if possible consist of two or three layers of string. In the case of a leak in the tank, if the fracture is sufficiently large some tow can be made by picking a piece of string, soaking it in oil, and packing it into the joint by means of a chisel or a strong blade of a penknife. White lead is, of course, at all times preferable to oil, and if a piece of tape can be used in conjunction with this a satisfactory and permanent repair can be effected. Whilst writing about the cooling system I would like to draw attention to the fact that in cases where engines over-heat without apparent cause, and where there is no doubt that the water is circulating in a perfect manner, it will be found that hard water has been used for cooling purposes. Well waters should never be used, as, almost without exception, they contain large quantities of mineral salts in solution. An invariable practice of using soft water only should be made if cooling troubles are to be avoided. Care should be taken, however, to strain soft water so as to prevent the admission of particles of foreign matter such as

are usually found floating on the surface of rain-water.

DRIVING OVER STONES.

It is very generally known that driving over newly laid patches of stones can cause considerable damage to tyres. Hence the problem of how to pass over with the least possible amount of harm is of great moment to the novice. Many drivers drop down to bottom speed and go over slowly. This, although much less risky than driving over fast, frequently results in the tyres being badly cut. The best way is to let the car run at speed right up to the patch of loose metal and take the clutch out before the front wheels strike the stones, when sufficient momentum will be left to carry it over the average-sized patch of stones. By this method the wheels are relieved of all driving strains and the tyres are less likely to be damaged, since they simply roll over the stones and are not subjected to any other severe strains than the dead load. If, on account of the length of the patch of road metal or an adverse gradient the car cannot be got to roll over, nothing remains but to drop down to the low speed and drive over slowly.

" MISFIRING."

A most common cause of misfiring is a sparking-plug fouled with soot. Some drivers are frequently troubled in this way, but an external spark gap in the secondary circuit is said to overcome the difficulty. Prevention being better than cure, one should see that over-lubrication is not taking place.

" VIATOR."

THE PRACTITIONER'S RELAXATIONS.

JOURNALISM.

An important feature of the events of the last fifteen years has been the growth, at a continually accelerating rate, of journalism. Time was when newspapers merely supplied a limited *clientèle* with information on current affairs, apportioning space to subjects according to their relative importance. For good or evil this has since been changed, first by Mr. Stead and then by the Harmsworths and others, who, coming at a time when the Education Act had greatly enlarged the literate class, made it their business to write up topics entertainingly. The "new journalism" thus started by them has, as everybody knows, achieved a great popular success, one of the minor results having been to increase hugely the number of occasional contributors to the Press, or, in journalistic slang, "free lances." The great bulk of the urban population having now to be daily informed, amused, and instructed through the medium of print, there is naturally an opening for anyone who can help to provide suitable mental provender. Not the least of the qualifications for doing so is the possession of special experience, which, indeed, may be of almost any nature whatsoever. So long as his subject has a fair amount of human interest, anybody with the capacity (and, of course, the taste) for popular exposition can add to his income by retailing his knowledge realistically or romantically at so much per thousand words. And the medical man, although he has not quite seen it yet, may do so too.

A FIELD FOR THE GENERAL PRACTITIONER.

It is an easy proposition to defend that in such a case he need infringe the rules neither of good taste nor of professional etiquette. If his name appear but on the back of the manuscript, and if only such subject matter be taken as is suitable for reputable journalistic treatment, the most critically minded in respect of medical ethics can raise no objection. Further, the informative medical article which is likely to form a considerable part of such output should be productive of nothing but good to all concerned, mainly because enlightenment of the public mind on such matters must, if the temptation to flavour them with idealistic mental placebos be resisted, help to bring about a state of public opinion which is at present sadly lacking. The author himself, too, may get some additional culture, although of a different kind.

GOOD AND BAD WRITING.

Unfortunately, our medical journals often contain contributions which, even after editorial furbishing, fall in the matter of style far below the lay journalistic standard. Writing, indeed, is much harder than is suspected. To begin with, distinct natural aptitude is required. A woman journalist lately remarked that writing was like flirting: those who would do it would practise themselves in the art without waiting to be told how, while nobody could teach the others. This is overstating the case.

Force of diction and power of happy expression are out of reach of most, but everyone should be able to learn to write grammatically, and, provided the meaning attempted is not too complex, clearly. Failing the peculiar faculty of a Dryden or a Scott, who seldom revised what they wrote, an immensity of patient practice is required. With regard to this the aphorism just quoted is true enough; only those with aptitude will have the patience. All need instruction, because all beginners tumble into the same pitfalls. One of the commonest of these is to think that a good style implies high-flown diction. The usual illustration of this error is to advise comparison of a piece of Milton's or of Ruskin's prose with one by Cowper or Swift. Were these passages read to a popular audience there is no doubt that the general vote would place the first two far above the others. Yet in reality Ruskin's rhetorical grace is a much less vital element of good prose than the strength and directness of Swift, and much easier to imitate. One should try to set out one's meaning so that it cannot fail to impress itself strongly on the mind of the most careless reader. To invert a well-known maxim, it may be said that the object of ordinary good writing is to make easy reading.

THE IMPORTANCE OF BEING THOROUGH.

To successful accomplishment of this hard task there are many pre-requisites. Hackneyed phrases must be avoided because by over-use their power of conveying sharp impressions has gone. In the search for synonyms the thesaurus is not to be despised as a mechanical aid, although the literary aspirant should try to acquire a large vocabulary of his own by study of good authors and of the dictionary, especially the etymological dictionary. Precision of style comes from writing just the word called for by the meaning, and no other. "Concise" and "succinct," for instance, do not mean the same thing, and therefore are not to be used indifferently. Having formed one's sentences with care for variety and got them to follow on one another connectedly and with the right punctuation, one should revise repeatedly with a view mainly to compression. Redundant words are a great hindrance to what Mr. Shaw calls "effectiveness of assertion." Probably a good many commas too will have to come out. Newman's *Apologia* and the schoolboy's essay are both peppered with them, but in the many intervening grades of prose composition it is well to limit their use to places where the voice naturally pauses. Idiom is valuable, but it should never lead into colloquialisms. In short, infinite pains need to be taken over whatever is written, since thus only can the writer get the practice necessary to develop his literary powers to their utmost, which in turn means, of course, the opportunity of better-paid work. Many good people look down on the popular article, whom it would greatly benefit as an exercise in composition.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

AN INCINERATOR FOR INFECTED MATERIALS.

ALL hospitals, sanitary institutions, and the like, have a serious problem in the safe disposal of dressings, infected clothing, mattresses, and sometimes of faecal matter. In the old days they were too often allowed to go the way of other refuse. All that could be was washed down the drains, and the rest was either buried or carted off with the refuse of the district.

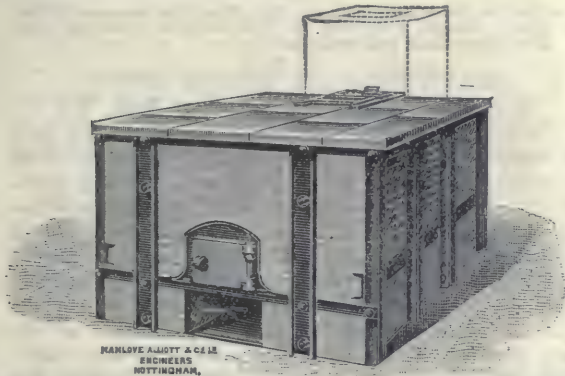


FIG. 1.—FRONT VIEW OF ORDINARY FORM OF INCINERATOR. THE FUEL DOOR IS SHOWN IN FRONT AND THE SLIDING DOORS FOR REFUSE ARE BOTH AT THE BACK.

Modern sanitation will not allow of this. Burying is often out of the question, if it were not forbidden for sanitary reasons. Hospitals are placed where they can be of the greatest service, and that is usually in the midst of a busy part of one or other of our great towns, and the space available for the purpose would be soon filled up. The materials referred to are not worth the trouble and expense of disinfecting, and there is, in addition, a lot

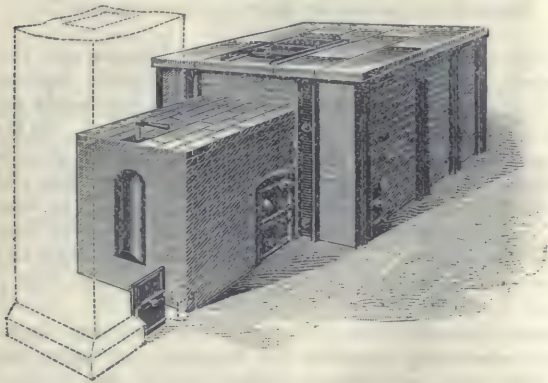


FIG. 2.—BACK VIEW OF ORDINARY FORM OF INCINERATOR SHOWING THE AUXILIARY FURNACE.

of garbage and other matter proceeding from a hospital that must be got rid of in some harmless manner. Modern science points to one method as combining the necessary qualifications for disposal of matter of the kind, and that is by burning. Burnt things do not take up room, like buried things do, and if the burning is properly carried out, there should be no chance of the spread of infection.

In order that burning shall be properly and economically carried out, certain conditions are necessary. The

apparatus employed should be easily handled by the ordinary hospital staff, and should not readily get out of order. It should be so arranged that the infected articles can be easily passed into it, and they should not require any special preparation. It should be capable of dealing with anything that it is found convenient to cremate, at any time of the day or night, and of any size within certain limits. In addition it should ensure complete cremation, not only of the substances themselves but of the primary products of combustion. The death point of nearly all the bacilli of diseases, as is well known, is comparatively low, very much below the temperature of an ordinary red coal or coke fire; but in order to make sure that the hot gases issuing from the apparatus employed to burn the infected material shall not communicate disease or be a nuisance to the neighbourhood, it is necessary, according to modern research, that the primary products of combustion, the substances produced by what may be termed the first burning of the articles, should be

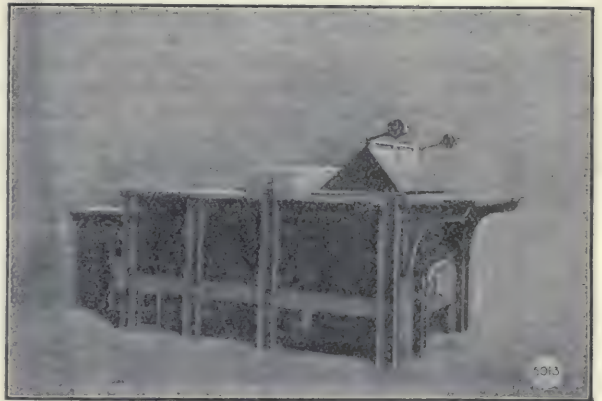


FIG. 3.—SPECIAL INCINERATOR FOR MATTRESSES AND OTHER LARGE OBJECTS. THE SLIDING DOOR AND SHOOT SHOWN ENABLE LARGE OBJECTS TO BE EASILY AND QUICKLY ENTERED.

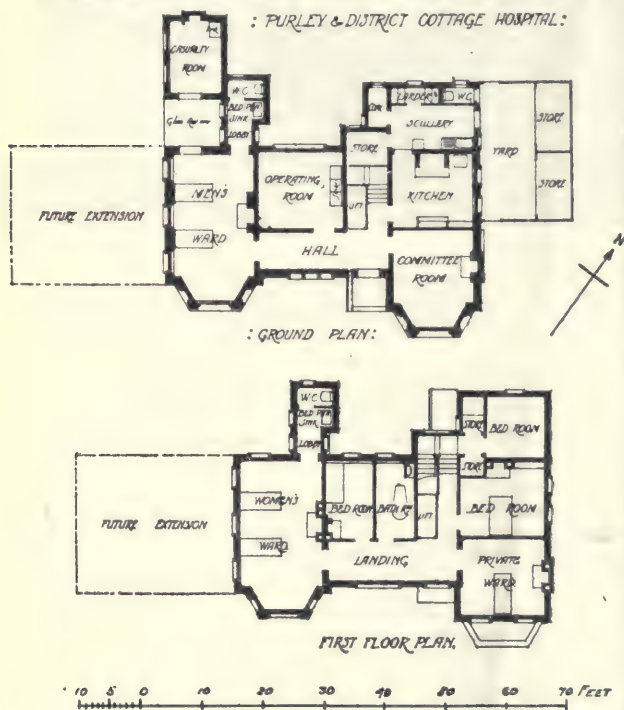
subjected to a temperature of from 1500° to 2000° F., in order that the final products may issue from the chimney in a harmless condition. If this is not done, though the hot gases passing from the chimney may not contain any disease germs, what they carry may form a bed for germs existing in the atmosphere around, with the result that an effect may be produced nearly as harmful as that produced by the older methods. Further, the apparatus employed for the purpose must not take up much room. Modern hospitals, sanatoria, etc., have so many demands upon their space that they cannot afford much room even for such an important apparatus as this.

In the accompanying illustrations we show apparatus of this kind, made by Messrs. Manlove Alliott and Co., of Nottingham, who have made a special study of problems of this kind. The apparatus consists of two chambers—one in which the primary combustion takes place, and the other in which the products of the primary combustion are themselves subject to the high temperatures mentioned. The first chamber is a furnace arranged to receive any

kind of material that may be delivered to it, and to consume it quickly. Figs. 1 and 2 show the ordinary form of "Incinerator," as the firm have named the apparatus, and fig. 3 one specially designed to take mattresses and similar large objects. As will be seen, there is a sliding door at the back of the top of the furnace, through which the articles to be burnt are entered, the door being immediately closed. The articles to be burnt fall on to a drying plate under the sliding door, and thence pass into the furnace proper. In the apparatus shown in fig. 3 there is a shoot, as shown, extending the whole length of the furnace, so that large objects can be entered. There is also a door at the front through which fuel is entered, and through which articles can also be pushed. This is convenient for small articles. There is a small auxiliary furnace at the back, shown clearly in fig. 2, which is fed with cinders from the fire grates, or any cheap fuel that is handy, and the primary products of combustion pass through this furnace, where they are subjected to the high temperatures necessary. The "Incinerator" is made in various sizes, and for every kind and size of hospital or sanatorium. It is made in portable form, as well as to be fixed inside the building, and is claimed to be easily worked by the hospital staff. The final products of combustion escape to the general chimney quite harmlessly.

PURLEY COTTAGE HOSPITAL.

THIS small hospital was opened by H.R.H. Princess Christian on March 31 last. It is planned at present for five beds on two floors, and provision is made for future extension by which the total number would be increased by some ten beds. This is on the assumption that in each



of the wings shown by the dotted lines on the plan, five additional beds could be placed on each floor. No provision seems, however, to be made for any increase in the staff—beyond the three provided for in the plan. A total of three persons, to include both nursing and servant staff, is surely inadequate even for a cottage hospital. The

building appears to have been planned on the most rigidly economical lines, there being only one bath-room available for patients and staff alike. No w.c. is provided for nurses, who would either have to use the outside one in common with the servants, or that attached to the female ward.

Apart from these criticisms, the building is planned in a compact and straightforward way, and the elevations are simple and suitable to the purpose.

The hospital was designed by Mr. John Newton, A.R.I.B.A., of Purley.

NEW APPLIANCES & THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

MEUX'S ORIGINAL LONDON STOUT.

(MEUX'S BREWERY, Tottenham Court Road, W.)

WE have received two samples of this stout. We have so recently in THE HOSPITAL published the report of an exhaustive inquiry in the chemical properties and therapeutic action of beers and stout that we only purpose entering very cursorily into the matter in this notice. In an interesting series of advertisement articles upon Meux's stout, the *Times* some three years ago made the statement that few people can say why ale is yellow and stout is black. Stout is black because part of the malt from which it is made is roasted, and this roasted malt gives to stout not only its characteristic colour, but also its sweetish taste. Among the many stouts analysed by our commissioners was Meux's London stout, with the result that they found this stout satisfactory in all respects. The brewery from which this stout comes was founded in 1764 by Richard Meux, and from that date to this it has continued to produce ales and stouts of high quality. The samples of stout sent to us are quite up to the usual standard, and we think this stout, brewed as it is from the best malt and hops by means of a carefully supervised technique, can be relied upon by the medical profession as a sound product.

EXPORT BROWN STOUT.—IMPERIAL RUSSIAN STOUT (DOCTOR BRAND).

(Brewed and bottled by BARCLAY, PERKINS AND CO., London, S.E.)

THE connection of the immortal Dr. Johnson with this brewery lends to it a very particular historic interest, although we dread to think what the great sage would say could he see his own portrait on the bottle labels. Of the two samples sent to us, one is export stout. This stout is brewed especially for export, is more heavily hopped, and contains more alcohol than the ordinary stout. It is, however, a thoroughly good stout, and carefully brewed from the best materials. The value of stout as a dietetic and therapeutic agent has recently been very fully dealt with in THE HOSPITAL's Commission on Beers and Stout. In this report it was clearly shown that stout was a beverage of good thirst-quenching properties and high nutritive value, and further that it was often exceedingly useful when given at night as a mild hypnotic. In our opinion, too much importance cannot be laid upon the careful dosing of this as of all other alcoholic beverages. One often hears that stout or beer does not agree with this patient or with that, but in our experience careful attention to dose would almost invariably give one the advantages one wants to obtain for one's patient, and will at the same time prevent the appearance of the undesirable effects. Stout is often best taken not with, but between meals. The nutrient material it contains is easily absorbed, and in the quantity taken practically exerts no action upon the digestive processes. Both Barclay's export stout and Imperial Russian stout are products of the highest class, and can confidently be relied upon as such.

NEWS AND COMING EVENTS.

MR. JOHN DYER has been elected Chairman of the Swansea Hospital Board.

THE proceeds of a collection on behalf of the poor of West Molesey and the East and West Molesey Cottage Hospital, made at Hurst Park recently, amounted to £53 18s. (including £17 8s. from those in the public stand).

THE new Cottage Hospital at Torrington, erected in memory of the late Hon. Mark Rolle, was opened last week. The building can accommodate ten patients, and has been fitted up with improved operating and consulting rooms.

SIR MALCOLM MORRIS and Dr. Newsholme, M.O.H. to the Local Government Board, have been appointed Government delegates to the International Congress on Leprosy to be held at Bergen next week. All the various colonies are represented at the Congress.

MR. W. M. MOLLISON, M.C., F.R.C.S., has been appointed Arthur Durham Travelling Student at Guy's Hospital. Mr. Mollison, who is one of the assistant surgeons at the Evelina Hospital, has held the usual students' appointments, and is at present one of the demonstrators of anatomy at Guy's Hospital Medical School.

ON November 2 next the National Hospital for the Paralysed and Epileptic, Bloomsbury, will celebrate its jubilee, and two days later the King will visit the institution for the purpose of inaugurating the various alterations now in progress. In connection with the jubilee the Princess of Wales has promised to visit the Hospital on October 9 to receive purses of not less than ten pounds each for the fund. On November 2 the Duchess of Albany will attend to receive purses of smaller amounts, and on the same day the Archbishop of Canterbury will preach at a special thanksgiving service in the hospital chapel.

AT a meeting of the English Committee of the Sixteenth International Congress of Medicine, held at the rooms of the Medical Society of London on July 22, 1909, Dr. F. W. Pavy, F.R.S., President, in the chair, it was proposed by Sir William Sinclair, seconded by Mr. Eliot Creasy, that the members of the National Committee be circularised as to the advisability of asking H.M.'s Government to invite the Seventeenth International Congress of Medicine to meet in this country. A report was made upon the appointment of official delegates at the Budapest Congress. Members of the Congress who desire to travel with the Royal Society of Medicine party should communicate at once with Mr. J. Y. W. MacAlister, at 20 Hanover Square, London, W.

DR. ARTHUR FOXWELL, who died in the Warneford Hospital, Leamington, on August 4, at the age of 56, as the result of a cycle accident on August 1, was born at Shepton Mallet in 1853 and was educated at Queen's College, Taunton, and at Cambridge. After studying at St. Thomas's Hospital and at the General Hospital of Vienna, he became successively Pathologist and Assistant Physician at the Birmingham General Hospital, and was for a time examiner in medicine for Cambridge University. He edited the *Birmingham Medical Review*, and was librarian of the Birmingham Medical Institute. As Senior Physician at the Queen's Hospital and Professor of Therapeutics in the University of Birmingham he was well known and highly esteemed by his professional colleagues and all who knew him.

A PARLIAMENTARY PAPER just published shows that on June 26 the aggregate number of paupers on the relief lists amounted to 784,434 persons (or 22.2 per 1,000 of the population), a decrease of 6.7 per cent. in the quarter. Compared with the position in the corresponding period of 1908 the figures show a substantial increase in the number of persons relieved in the present year. The rate of increase during April ranged between 1.9 and 3.8 per cent., but it fell considerably during May (ranging between 0.9 and 1.3). A slight increase occurred during June, and on the last Saturday in the month the numbers relieved were 2.0 per cent. in excess of those recorded on June 27, 1908. The rate of pauperism to population shows a corresponding increase, standing at 22.2 per 1,000 of the population at the end of June, as compared with 22.0 per 1,000 on the corresponding day in 1908.

At the last meeting of the board of governors of the Battersea General Hospital the following resolution was carried unanimously:—"That in respect of the grant of £97 10s. voted by the Council of the Metropolitan Hospital Sunday Fund, the board of the National Anti-Vivisection Hospital and Battersea General Hospital acknowledges with grateful thanks the action of those friendly to the Anti-Vivisection Hospital in voting and carrying the vote of the council of the Metropolitan Hospital Sunday Fund, and appreciates their efforts, upon which it sets a very high value. The board, however, cannot overlook the fact of the deeply injurious remarks made by certain members of the council and distribution committee, not only as regards the system of the Anti-Vivisection Hospital, but also the efficiency of its treatment. To emphasise the board's denial of those offensive assertions, which have not the slightest foundation in fact, it resolved not to accept the grant named, or any grant, until it can be voted in an impartial and dignified manner."

THE time has apparently come for an effort to be made to gather together in one nucleus the various units of progressive and experimental thought which to-day constitute the psychical, spiritistic, and spiritual interests of society. It is with this object in view that an International Club for Psychical Research has just been started in London. Besides the usual accompaniments of a club—*table d'hôte*, general and private reception, reading and writing rooms, residential facilities for country and foreign members—a large and complete library of the literature of the psychical and all "occult" sciences will be supplied for the use of members. It is hoped to secure as President a man of scientific qualifications and authority, under whose direction the committee will arrange for lectures to be given at short and regular intervals. A bulletin of the proceedings will be published regularly for free circulation among members; systematic arrangements will be made for the development of promising mediums, for holding long series of experimental sésances on the premises of the club (members only to participate). Appliances and apparatus for the study of the physical effects of mediumship, photographic facilities, etc., will be supplied for the exclusive use of members. Suitable premises for the Club House have been secured close to Piccadilly and Pall Mall, in the heart of Clubland, and the opening ceremony will take place early in October. Further particulars can be obtained of Mr. Wynan Hope, *Annals of Psychical Science*, 110 St. Martin's Lane, W.C., or of Mr. Dudley Wright, Editor of the *Annals*.

MELBOURNE NOTES.

(FROM A CORRESPONDENT.)

THE rebuilding of the Melbourne General Hospital, contemplated for the past twenty years, will be begun early in the new year. The present hospital has long been too small, and, as it is to be rebuilt on the same site, it must naturally ascend nearer the clouds. The enterprise has been facilitated by the gift of £120,000 from the Trustees of the Edward Wilson (founder of the *Argus* newspaper) Estate, September 1907. One of the conditions of the donation is that building shall be commenced within eighteen months and completed within five years. No part of the hospital will be closed, as the work will be done piecemeal, beginning at the north-west corner, where at present stands the Secretary's house, which will be demolished to make room for a much larger—and it is to be hoped much better—out-patients' department. A feature of the new hospital is to be the most up-to-date provision for clinical investigation, and it is expected that the State of Victoria will be put in possession of one of the finest hospitals in the world. In pursuance of this ideal it is proposed to create new departments—gynæcological, eye and ear, etc. This proposal brought forth strong protests from the committees and medical officers of the special hospitals. A deputation waited on the State Treasurer, who has the allocation of the Government charity money, and it was only on the solemn promise of the Melbourne Hospital representatives that these special departments would not be allowed to expand beyond their scope as observation wards that the scheme was passed, the conditions being that it should have a ten years' trial, and that only one specialist should be appointed to each department. As the Treasurer remarked, "The overlapping of our charities will have to be legislated for at an early date." He further said that he contemplated introducing legislation to control the charity system, to deal with the mode of electing medical staffs, and to establish an intermediate hospital for patients of small means. As a fact, the Melbourne Hospital is almost alone here in having no special departments, the Alfred and St. Vincent's and the Sydney General Hospitals all following the British model.

Meantime an unknown donor had offered £5,000 towards the building of a children's wing at the Homœopathic Hospital. The idea was submitted to the State Treasurer with a request for additional financial assistance. A reply in the negative was given promptly. There was already a well-equipped Children's Hospital. Some of the wards could be set apart for the homœopathic treatment of children, and the doctors of the two schools of medicine need not come into contact.

Simultaneously the Alfred, the other large general hospital of Melbourne, is about to spend the sum of £13,000 on enlargements and repairs, another indication that no matter how much hospital accommodation were provided it would all be taken up immediately.

Mr. A. White, a receiving clerk in the Melbourne Telegraph Department, has patented a very neat invention in connection with telephone mouthpieces—a tiny, hollow drum of antiseptic paper attached to the transmitter. The piece of paper used at each conversation is torn off and a fresh slip drawn over.

THE rapid success which attended the publication of Dr. T. D. Savill's "System of Clinical Medicine" has rendered a second edition necessary, and the author has taken advantage of this to correct and revise the whole work throughout. The new edition will be in one volume, and will be issued by Mr. Edward Arnold about September 1.

EDITOR'S LETTER-BOX.

ANTI-VACCINATIONISTS AND MODIFIED SMALLPOX.

To the Editor of THE HOSPITAL.

SIR,—I have read with much interest your article in the issue of July 31 bearing the above title. With the first part I have no desire or intention to deal, beyond remarking that the anti-vaccinators do not monopolise the opprobrious epithets used towards opponents on this subject. It must not be overlooked that the profession have obtained penal powers for the enforcement of a surgical operation, and that resistance thereto has cost those who disbelieve in it many thousands of pounds, whilst many more have had their homes sold up or gone to gaol—only to be dubbed cranks, eccentrics, faddists, fanatics, etc. The elucidation of a great problem does not lay that way. But the writer of your special has made a slip when, after quoting Dr. Millard to the effect that it is "the adult population which is the principal factor in the spread of the disease," he adds by way of comment "that part of the population, in fact, which is least efficiently vaccinated." Obviously, according to the pro-vaccinist theory, the least protected, of whatever age, are those who have never been vaccinated at all, and yet in this borough—with tens of thousands such—they exhibit no particular susceptibility either to contract or to spread the fever. I quite appreciate the difficulty of diagnosing accurately in every instance smallpox in its earlier stages, but the point is that modified attacks are capable of communicating virulent forms to others. That seems to show that the severity of an attack is regulated by the bodily, and not by the vaccinal, condition of each individual. For something like thirty years—with an ever-increasing unvaccinated population—the comparative immunity of the latter class has continued most marked, despite the severe tests to which the town has been put during smallpox prevalence, up and down the country, and even during the epidemic periods of 1892-3 and 1903-4 the abnormally low case-fatality must have confounded those who have constantly predicted what will happen here whenever smallpox is imported. In the former instance 346 cases produced 21 deaths, whilst on the latter occasion, with 715 cases there were only 25 deaths. Does not this suggest that there are other modifying influences at work besides that of vaccination? I venture to think that the production of a healthier race of children in a town where the value of sanitation is appreciated accounts for a good deal, coupled with the more rational treatment of patients now as compared with olden times. You tell us what the profession are prepared to do "when the biology of smallpox has been worked out," but I doubt not will admit that this—one of the oldest recorded diseases—still baffles your ranks. Less than three weeks ago it was again reported (this time from Rio de Janeiro) that the microbe had been found. Periodically we get a statement similar to this from various parts of the world, only to be apprised shortly afterwards that it was not the genuine article after all. By all means continue your scientific investigations, but drop your compulsion and the association of the noble work of the profession with that of the policeman, the bailiff and the warder, whilst you are still in the experimental stages.—Sincerely yours,

Leicester, August 9, 1909. JOHN H. BONNER.

MR. LEONARD COLEBROOKE, M.B., B.S. London, has been appointed resident medical officer of the newly opened inoculation wards in the Clarence Wing at St. Mary's Hospital.

NURSING ADMINISTRATION.

THE ADMINISTRATIVE SIDE OF SANATORIUM WORK.

III.—WORK AS TREATMENT.

THE great danger of the sanatorium undertaken by municipal effort is that cases may be despatched to the working colony for whom the system is useless, if not actually harmful. The particular form of treatment which relies upon active exercise combined with open air is still in its experimental stages, and there can be no doubt that it produces its best results in connection with a hospital for diseases of the chest, and when work can be regarded strictly as a therapeutic agency. The work carried on under Dr. Patterson's superintendence at Frimley first demonstrated the enormous healing force of man's natural activities, scientifically directed, in the cure of disease, and Frimley still leads the way in the science of applying natural means to the great end of health. Working as the Frimley colony does, as a branch of the Brompton Hospital for Consumption, it is possible there to extend the benefit of graduated labour to patients who would be completely out of place in a small sanatorium unprovided with a permanent fully trained staff, and aiming only at arresting the disease in its opening stages. This distinction must be borne well in mind by promoters of sanatorium extension. Cases may be easily quoted in which the labour treatment has proved eminently successful in cases of advanced consumption. But to argue from these successes that advanced phthisical patients can properly be received in the simple kind of sanatorium to which these articles relate, would be to expose the sufferers to grave danger and go far to discredit the whole system. The medical authority selected to examine and select patients for the sanatorium ought, if possible, to have experience in this form of treatment. He ought to have full powers to send only such patients as in his judgment are likely to be benefited by the graduated labour provided, and he must guard against the temptation of allowing the patient's distressing circumstances to weigh with him in his decision. There is more at stake in this matter than the individual patient. It goes without saying that the daily supervision of a competent medical man is an absolute *sine qua non* in the sanatorium, although in small establishments it is neither possible nor at all necessary to secure a resident.

When the right kind of patients have been secured (their name is legion), and when arrangements have been made for placing them under expert medical supervision, it will at once become apparent that they fall into several distinct categories. A certain proportion, including by far the greater number on first arrival, will be marked out for absolute rest until temperature and pulse indicate that the more regular treatment may safely be begun. After this stage is reached there are various grades through which the patient who responds satisfactorily to the treatment slowly progresses.

The following is the scheme of work as arranged at the Maitland Sanatorium:

CLASSES OF GRADUATED WORK.

(a). Cleaning of silver, brass, copper, basins, lamps, etc.; other light domestic work.

(b). Light gardening: Using hoe and rake, sweeping, lawn cutting, weeding, etc.; pony rolling; window and paint cleaning; painting or tarring; small repairs.

(c). Light spade work; heavy spade work; wheeling barrows; screening earth; path making; chopping wood; carpentering; farm work.

The scheme of graduated work is divided into time stages as follows:—For patients in Class A, 1½ hours (9 to 10.30 A.M.); for patients in Classes B and C (1), 2½ hours (9 to 11.30); (2) 4 hours (9 to 11.30 and 2 to 3.30); (3) 6 hours (9 to 11.30 and 2 to 3.30 and 4 to 5.30); for the working staff, 8 hours (7 A.M. to 5.30 P.M., less 2½ hours for meals).

The following is a brief epitome of the system at Frimley:

The grades of work and exercise are: (1) Patients unfitted for active exercise make mops, mats, sew, etc.; (2) walking from one to six miles a day; (3) carrying baskets of mould, watering plants, weeding, etc.; (4) using a small shovel, etc.; (5) using a large shovel and mowing grass; (6) trenching, etc.; (7) as soon as a patient is considered fit to be discharged he is put to work at his trade, if he has one, for six hours a day for three weeks, in order to get the necessary muscles again used to the work.

As an example of what can be done by utilising labour intended primarily for the benefit of the individual, and only secondarily for profit, the record of the achievements of the Frimley patients is most instructive:

THE GARDEN.—The soil is light and very poor, and requires a considerable amount of "working" before it becomes productive. The drain pipes among the flowers are to enable the plants to be watered at their roots, even though the sun is out. The whole of the grounds are kept in order by the patients. No money is spent on labour. The patients have completed a concrete reservoir, to hold half a million gallons of roof and surface water, for use in the baths and as a storage in case of fire. One thousand nine hundred and fifty-six working hours were occupied in its completion. The total weight of the concrete mixed and wheeled into position by the patients being 996 tons. The amount of earth excavated and carted away by the patients' own labour amounted to 4,175 tons.

The following work has been carried out by the patients since the opening of the Sanatorium: (1) Digging, manuring, and sowing over an acre of grass; (2) painting the outside of the woodwork of the buildings, and the whole of the inside of the administrative block, as well as some of the wards; (3) making most of the paths; (4) laying the concrete walk to the dining hall; (5) making a concrete sub-way, 150 yards in length, from the engine-room to the kitchen; (6) clearing a 20-foot "fire zone" round the boundary; (7) trenching and sifting about 3½ acres of land; (8) getting and sifting gravel for the paths; (9) making the terrace and rock garden round the tennis court by the medical officers' house; (10) making the bank round the grounds; (11) felling and cutting into firewood about 200 trees; (12) laying out a considerable portion of the grounds; (13) building the greenhouse; (14) making the whole of the seats and poultry appliances; (15) laying down 1,500 feet of high-pressure fire mains with hydrants.

The secret of success in the labour department is organisation inspired by personal devotion. Routine without the gift of individual sympathy and the glow supplied by enthusiasm becomes cold, lifeless, and burdensome. Enthusiasm without the gifts of order and foresight is worse than officialism, it is positively dangerous. It is the happiness of sanatorium work to have enlisted both hearts and talents in its service.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, AUGUST 16 to 21.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

August 16 and 19, Surgical Registrar, Demonstration.

August 20, Medical Registrar, Demonstration.

At 12 noon.

August 16, Dr. Bernstein, Pathological Demonstration.

At 12.15 p.m.

August 17, Dr. Pritchard, Practical Medicine.

August 18, Dr. Grainger Stewart, Practical Medicine.

At 3 p.m.

August 18, Dr. Grainger Stewart, Medical Cases.

August 19, Dr. Davis, Medical Cases.

At 4 p.m.

August 20, Mr. Armour, Surgical Cases.

At 5 p.m.

August 16, Mr. Pardoe, Difficult Micturition and Retention of Urine.

August 17, Dr. Low, Insects as Carriers of Disease in Tropical Climates.

CHARITABLE BEQUESTS AND DONATIONS.

THE Chelsea Hospital for Women has received from Lady Tate £1,000 to endow a bed.—The London Fever Hospital has received £100 from Lieut.-Colonel the Hon. G. W. Windsor-Clive.—The Seaside Convalescent Hospital, Seaford, Sussex, has received £1,000 from Mr. Otto Beit.—The London Skin Hospital has received £1,000 granted by the executors of the will of the late Mrs. Hannah Bland.—The late Mr. C. G. Swan left the sum of £500 to endow a cot at the Bristol Royal Hospital for Children and Women.

MRS. CATHERINE CASTLE, of Clifton, who died in April last, left estate of the value of £55,532. She bequeathed to various persons sums amounting to £6,800, the bequests in each case to be held in trust, with remainder to the Bristol Charity Trustees. She also left £10,000 to the same charity, the yearly income of this amount to be divided, together with the income of the contingent bequests when received, into equal parts and paid annually to indigent ladies—the unmarried orphan daughters or the widows of Bristol merchants, bankers, physicians, surgeons, barristers, or solicitors. She also left £2,000 to the

Bristol Royal Infirmary to endow a bed in memory of Boddam Castle, for twenty-seven years an active member of the committee, and £200 to the Clifton Dispensary.

MISS EMMA WOLFE, of Jarvis Brook, Sussex, who died last month, and left estate of the value of £71,520, bequeathed, among many charitable legacies and bequests to learned societies and institutions, £1,000 to the Royal Anthropological Institute, £500 to the General Hospital, Tunbridge Wells, and £200 to the Cremation Society. She left the residue of her estate—apparently upwards of £50,000—to King Edward's Hospital Fund, the Royal Institution, Albemarle Street, and the Royal Society, Burlington House.

THE Football Association, at its recent Council meeting, made the following grants to charities: Northampton Town and County General Hospital and Royal Victoria Infirmary, Newcastle-on-Tyne, £25 each; Newcastle-on-Tyne Dispensary, £20; King's College Hospital, London Hospital, Children's Hospital, Paddington Green, St. Mary's Hospital, St. Bartholomew's Hospital, St. Thomas's Hospital, and Charing Cross Hospital, £10 each; Surgical Aid Society, £7 9s. 7d.; Poplar Hospital, Royal Free Hospital, Lock Hospital, Dental Hospital, Kettering Hospital, the Blind Institution, Wellingborough Cottage Hospital, and Northampton Orphanage for Girls, £5 each.

The Sanitary Inspectors' Examination Board.—An examination for certificates of qualification for appointment of sanitary inspector or inspector of nuisances under Section 108 (d) of the Public Health (London) Act, 1891, will be held in London on Tuesday, January 18, 1910, and the four following days. In the event of a sufficient number of candidates making application, at least a month previously, examinations may also be held at the following centres: Birmingham, in June, 1910; Bristol and Cardiff, as arranged in 1910; Liverpool, in April 1910. All necessary particulars will be forwarded on application to the Hon. Secretary, the Sanitary Inspectors' Examination Board, 1 Adelaide Buildings, London Bridge, E.C.

The rate of annual subscriptions to THE HOSPITAL, either direct from the Office or through agents, is:—

For the United Kingdom	15s. a year.
For the Colonies and Abroad	17s. "
For the United Kingdom (with Insurance Policy)	£1 "

inclusive of postage in each case.

THE BEST NATURAL APERIENT WATER.

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Professor Immermann, Basle, Professor of Internal Medicine at the University:—

"Hunyadi János has invariably shown itself an effectual and reliable Aperient, which I recommend to the exclusion of all others. Never gives rise to undesirable symptoms even if used continuously for years."

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

NEW SERIES. No. 130, VOL. V. [No. 1202, VOL. XLVI.]

SATURDAY, AUGUST 21, 1909.

THE REPORT OF THE COMMISSIONERS IN LUNACY.

THE 63rd Report of the Commissioners in Lunacy derives somewhat of unusual interest from its references to the suggestions thrown out last year in the Report of the Royal Commission on the Care and Control of the Feeble-minded. It will be remembered that the Royal Commission, among other recommendations, pronounced for the segregation and restraint of certain classes of persons of defective intellect, especially weak-minded women and girls, with the object of preventing them from becoming parents. It is not surprising to find this recommendation affirmed by the Report, and the wonder is that some measure of this kind has not long ago been enforced. Life is not without its hardships even for those who enter it with a full endowment of mental and bodily integrity, and no great effort of the imagination is required in order to appreciate the extent to which mental weakness enhances the sad side of it. Not least among the mysteries of our existence, from the individual's point of view, is the hard fact that not only the sins, but also the disabilities, of parents are visited so heavily upon their children. But the fact is indubitable, and not to reckon with it is to fail in our duty to posterity. In the ordinary course of nature those inherited sins and disabilities which diminish the efficiency of individuals act as their own corrective according to the laws of survival; but since the humanity of civilised societies does not permit this natural purification of the stock to attain a due fruition, it is reasonable and right that artifice should be invoked to provide a substitute. Certain it is that life without health is not worth living, and if there is one article in which, more than all others, the stewardship of the present generation should be exercised for the benefit of those to come, it is in the provision of good health for the new-born. By comparison with this all benefits conferred upon damaged lives sink into nothing. It is meritorious to provide for shipwrecked mariners, but better far to ordain that they shall not go to sea in crazy vessels.

We recognise that while it is easy to write thus in the abstract, the application to practice of a principle with which no sober person can disagree is fraught with difficulties. For the gradations of

mental weakness are so infinitely minute, and its manifestations at times so curiously partial, that it may be impossible to define the limits of normal variation. With children who are manifestly imbecile it is easy to deal. Indeed, the segregation of them is already a condition of their continued existence and involves restraint upon parenthood. But there is a large class of mental defectives who, while not so imbecile as to be unfitted for the simplest and most mechanical labours, yet are morally insane. It is these persons who threaten posterity. It is from their ranks that the majority of girl-mothers of illegitimate children are recruited, for no sense of responsibility or shame is at command to temper the bare animal passions. And what is likely to be the endowment of a child who has such a one for a mother, and for a father one so graceless as to take his mean advantage! For such a girl there is no escape from calamity. Humanly speaking, she is foredoomed to live upon the streets and end her miserable existence in a drunkard's grave, leaving her dismal heritage to others. Certainly something must be done to break this hateful entail of suffering. It may be difficult in the slightest cases to say, "This person is mentally unfit to be a mother"—it is obvious that the segregation of defective males is not nearly so important for the purpose in hand—but, with the increasing attention which is being bestowed upon the medical examination of school children, it ought not to be a matter of insuperable difficulty to weed out these defectives and to place them under such control as is equally necessary for their own welfare and that of the next generation.

The Report affirms also the suggestion of the Royal Commissioners as to the necessity for putting under effective restraint the large number of defectives who commit offences entailing punishment, yet whose mental condition makes punishment an unsuitable method of treatment. Clearly society must protect itself against evil-doers, but the experience of centuries has shown the futility of punishment (in the ordinary sense) as a corrective for the confirmed criminal no less than for the confirmed drunkard. The moral obliquity which produces such offenders finds no antidote in periods of imprisonment. The first moment of freedom is abused

for evil purposes, and thus the whole of a life is spent in a gloomy alternation of criminality and gaol. In these cases society is undoubtedly entitled to say, "You have shown that your liberty is a danger to the State; it is therefore forfeit to the State." These people do not require punishment so much as permanent segregation. Not only are they useless citizens and actively dangerous to the welfare of the general public, but in their intervals of enlargement from prison they exert a most pernicious influence upon those in their immediate circle. There must always be a type of the youthful mind particularly susceptible to the allurements of these masters in crime—boys and girls who are attracted in the first instance by the romance and excitement attending criminal exploits, and who find too late how hard it is to retrace their steps. It is not possible, of course, to protect all such people from the consequences of their folly, but something may be done by permanently segregating those confirmed gaol-birds who

have proved themselves to be foci of social poisoning. Finally, the Report entirely approves the suggestion of the Royal Commission that the permanent Commission in Lunacy should be strengthened by the appointment of two additional medical members. It points out that modern views of insanity as a disease rather than a mysterious visitation render it appropriate that the personnel of the Lunacy Commission should be predominantly medical. This is an admission of the utmost importance, for it shows that the medical view of insanity is at long last winning its way. As the Report says, insanity is a disease, and the Lunacy Commission, in virtue of its being the central controlling and advisory authority, should be in a position to encourage workers and to assist in determining lines of inquiry, designed to elucidate the malady. Such functions can, in the opinion of its present members, only be met by a substantial increase in the proportion of its medical to its legal elements.

VOLUNTARY AID IN WAR.

THE Army Council, as announced in the daily papers on August 17, has had under consideration the provision of organisation for the relief of the sick and wounded during home defence; and has drawn up and issued a scheme for such voluntary aid in England and Wales, which has been issued to Territorial County Associations throughout the country. By this scheme the County Associations are charged with the responsibility of the organisation of voluntary aid in each county, and are recommended through the local branches of the British Red Cross Society to form "voluntary aid detachments" with an establishment which is laid down in the scheme: each detachment to be capable of being used as a clearing hospital, a rest station, or as the personnel of an ambulance train, as the circumstances of the moment may demand in time of war. The training and equipment of these voluntary aid detachments is to be carried out in whatever way the British Red Cross Society thinks fit; but they should be so arranged as to be able to make use of local resources for improvising accommodation for and transport of wounded to the general hospitals. They are, in fact, to fill the existing gap, at present quite unbridged, between the field ambulances and the general hospitals. Since the former are intended to be essentially mobile units, capable of transporting themselves at a moment's notice to the scene of action, it is evident that the solution of the problem of the evacuation of their patients rapidly and successfully is vital to the whole organisation of medical aid in time of war. To utilise the Red Cross Society to fill this gap

seems to us a mistake. Dictated probably by the financial starvation which is threatening the very life of the Territorial scheme, this policy of wedging in an amateur, non-disciplined, and untrained link between the field units and the general hospitals seems to be much of a piece with the strictly paper equipment of the two ends of the chain, and just as likely to break down seriously when the strain comes. It is not fair or desirable that a voluntary society such as the Red Cross should be expected to equip, as well as to raise the personnel of, such essential parts of the organisation of our medical service for war as the "clearing" and "stationary" hospitals. This is the duty of the War Office, and to no outside corporation should it be delegated. It is some satisfaction to see it authoritatively recognised that something must be done, but much less so to note the half-hearted and niggardly way in which the provision of the remedy is set about. The Red Cross Society, and the St. John's and St. Andrew's Ambulance Societies, too, might well be entrusted with the care of those who are well enough to be discharged from the stationary and general hospitals but unfit immediately to resume their places in the firing line. But the proper place for a clearing hospital is within a few hours' march of the firing-line, and even on occasions almost within gunshot of it; and we must repeat that the chaos of the modern battlefield, and especially the horrors of its hospitals, are more likely to be accentuated than diminished by the intrusion of untrained and unequipped amateurs of both sexes into the midst of operations.

ANNOTATIONS.

Cinematographs and the Public.

THE unfortunate panic which occurred at a cinematographic display at Southsea this week will help to draw attention to the urgent necessity for safeguarding the public interests in places where such entertainments are given. An attempt has been made by the present Government to deal with the matter in the Cinematograph Act which was passed on August 9, and which is shortly to be enforced. The Southsea disaster comes aptly—though one could easily have missed so unlucky a reminder—to urge the arguments in favour of this short, concise and wholesome little new Act which makes what appears to be adequate provision for the public safety. By its terms cinematographic displays, or indeed any displays which involve the use of inflammable films or dangerous material, can only be given in properly licensed rooms. Such rooms must be inspected by the local authorities, who have powers under this Act to carry out its provisions. In cases where entertainments are not habitually given, but where the display is only taking place for "once in a while," as the saying is, due notice of such entertainment must be given to the local authority, whose sanction must be obtained before the entertainment can be begun. These provisions seem to us to be adequate and to provide the necessary safeguards, so far as it is possible to provide for such. At present many of these "shows" are veritable death traps in case of fire or a panic, and the wonder is that there have been so few disasters so far.

Medical Candour.

MEDICAL men are often asked by their lay friends for an expression of semi-professional opinion on matters which are popularly supposed to be semi-scientific. However flattering such requests may be, they have a sad side in so far as an open and honest expression of the practitioner's candid thoughts upon the subject not infrequently alienates the friendship of his lay acquaintance. In our editorial capacity we have on many occasions received similar requests, not always from lay readers, and we have doubtless been accused of partisanship, prejudice, and all the mental obstinacy of a Turkish seraskier, for having editorially been incautious enough to believe in the "good natured tolerance of all men." The awful example of Gil Blas, whose candour in reply to the Bishop's cordial invitation to express an opinion on the episcopal pulpit methods, led to his summary ejection from the palace, should serve as a warning even if we had not examples of our own, as every practitioner has, to refer to. But there are times and occasions when plain speaking becomes a duty which medical men, collectively or individually, cannot and may not shirk. There are many popular fallacies of the day—fallacies which are the more mischievous in proportion as they are held more honestly—which demand exposure and confutation. These fallacies it is the duty of the medical man, once they are referred to him for an expression of opinion, em-

phatically to deal with, even at the risk of being misunderstood, misquoted, and misinterpreted by the laity. It is therefore with considerable pleasure that we have noticed in a lay contemporary a medical man's protest against the fallacy of what Sir James Crichton Browne is pleased to call "Parcimony in Nutrition." The simple life may be carried too far, and we are not all Cornaros, nor likely to be if Chittenden's subjects expressed themselves so strongly on the subject of spare diet as they are alleged to have done. We are told, in fact, that many of the subjects who have been vaunted as "perfect examples of the possibility of living on a minus daily diet" told impartial investigators that they consoled themselves on the sly by lunching when they were supposed to be starving, and consuming bacon and beans when their official ration was supposed to be a diet calculated on a more rigorous basis than Banting's or Valsalva's. We need not agree in everything with our professional friend who so bravely takes up the case for the pleasures of the table, but all diet reformers must admit that there is a great deal of common sense in his remarks. At any rate it is high time for someone professionally to protest against the simple life carried to an absurdity and moderation in diet brought to the verge of semi-starvation.

Meat Preservation.

THE recently issued report to the Local Government Board on the subject of the application of formaldehyde to meat, presented by Drs. Buchanan and Schryver, contains many points of interest. The use of formaldehyde as a preservative has of late been increasing in the trade, particularly in the case of chilled meat brought from South American ports to this country. Meat safes fitted with arrangements by which meat deposited in them can be "fumigated" with formaldehyde are becoming popular with provision merchants, and the various solutions containing the preservative are advertised as being "non-acid and non-poisonous." The examiners appointed by the Local Government Board appear to have gone very fully into the matter, and their conclusions are that from a sanitary point of view no objection can be taken to the formalin treatment (fumigation) of chilled meat in so far as "it forms a satisfactory and convenient method of disinfecting and sterilising the hold in which the meat is placed during the voyage." At the same time the examiners insist that there are substantial and well-founded reasons for objecting to the presence of formaldehyde in food stuffs. It is a very powerful disinfectant; even comparatively small quantities materially affecting the digestibility of meat by combining with the proteid and forming a less digestible compound. For these reasons the Departmental Committee in 1901 recommended its total prohibition as a food preservative. The examiners conclude their report by advising meat importers and traders to limit the use of formalin to the adequate disinfection of the holds before the meat is introduced.

MEDICAL OPINION AND MOVEMENT.

AT a recent meeting of la Société Médicale des Hôpitaux attention was called by Roger and Lévy-Valensi to a reaction which is of use in testing sputum in doubtful cases of Tuberculosis. This they call the albumino-reaction of sputum, and its main advantage lies in the simplicity of its application. The sputum is diluted with a little water, the contained mucus is precipitated with acetic acid, and the mixture then filtered. The filtrate is next tested for albumin by heating and adding a few drops of potassium ferrocyanide. A positive result has been obtained constantly with tuberculous sputum, but acute and chronic bronchitis gives a negative one. Albuminous exudates are found in cases of pulmonary congestion, broncho-pneumonia, and pneumonia during the acute stage, but these disappear when the inflammatory period has passed away. In the case of a slowly resolving broncho-pneumonia a negative reaction eliminates tuberculosis. The reaction is not meant to displace the usual methods for the detection of tubercle in the lungs, but is useful in being a rapid, and, in the authors' opinion, a reliable test for the absence of tubercle when its results are negative.

THE therapeutic value of Lumbar Puncture in cases of cranial injury is well brought out by Savy in a case reported by him in *Le Lyon Chirurgical*. The patient was brought into hospital unconscious after a fall from a height. The appearance, a day or two later, of a subconjunctival hæmorrhage, led to the diagnosis of a fracture of the basis cranii; but no surgical interference was deemed advisable in view of the progressive amelioration of the condition of the patient, who took his discharge from hospital five weeks after the accident. It was not until three months later that the patient experienced further symptoms, consisting of weakness and rigidity of the lower limbs accompanied by constant headache. After a few weeks in bed, the patient was readmitted to hospital with characteristic meningeal symptoms—headache, sickness, constipation, delirium, a fluctuating temperature, and a well-marked Kernig's sign. In addition he complained of pain along the course of both sciatic nerves. Lumbar puncture was performed, and a collection of black, tarry blood was evacuated drop by drop. No improvement followed this first puncture, but a second and a third led to improvement. No blood or cerebro-spinal fluid was obtained at a fourth operation. The interest of the case lies in the long duration of the latent period between the accident and the onset of symptoms, and in the possibility of evacuating a still-fluid effusion from the cord so long after its production there. The author is of opinion, in view of this result, that lumbar puncture should be tried in all cases where more or less definite nervous manifestations follow a cranial injury, even when a marked interval of time has elapsed between the injury and the onset of symptoms.

THE degree to which different individuals are affected by Bites from Insects is extremely variable; some persons suffer from very great pain and discomfort even from flea-bites; midge-bites make some individuals really ill; mosquito bites are painful in almost everybody. There is no specific remedy for this pain, many preparations have been tried. The following have been particularly recommended:—1. Parogenum B.P.C.; 2. Parenol liquidum B.P.C.; 3. Iodine 3ss.; petrolatum saponatum 3j. (Moloney). Saponated petrolatum is prepared by mixing together the following: Liquid paraffin, 100 parts; oleic acid, 50 parts; alcoholic solution of ammonia containing 10 per cent. of ammonia by weight, 25 parts. A few drops of the application rubbed over a mosquito bite often removes the pain like magic, and it may also be used for other bites, such as those of bees or wasps.

WE recently quoted in these columns a report upon repeated Cæsarean Section. Garipuy, in *La Presse Médicale*, has now collected a number of cases in which this operation has been performed twice. From a study of these he has formulated rules to guide the operator regarding both the proper time to intervene and the *technique* to be followed. In view of the possibility of a uterine rupture through the scar of the old incision should surgical interference be delayed until after the onset of labour, he believes that operation should take place as near term as possible. The abdominal incision should be made parallel to and a little to one side of the old scar, which then should be completely resected to guard against hernia. The first difficulty met with arises from the presence of utero-parietal, utero-omental, and utero-intestinal adhesions. Of these the last are the most troublesome, and at times resection of part of the intestines may be necessary. Utero-parietal adhesions are, however, much the most common, and if abundant will render delivery through a median incision impossible. A lateral incision will be necessary in such cases, or a hysterectomy may even have to be performed. The uterine incision, when possible, should be made parallel to and a little to one side of the former operation scar. A further difficulty may then arise from adherence of the placenta to the scar. Two circumstances render hysterectomy necessary. If there be marked thinning of the scar, a hysterectomy will prevent the dangers to which a subsequent pregnancy may give rise. The presence of a large number of adhesions, which a second operation will still further increase, render it undesirable that a further pregnancy be possible. If it be found impossible to remove the organ, the tubes should be ligatured with a view to sterilising the patient. Despite the increased difficulty of subsequent operations, the author believes, however, that hysterectomy should be performed only when the indications are especially well marked.

IN cases of mixed infections the possible attenuating or intensifying effect of one microbe upon another is well known. An interesting example of an Anthrax Infection Modified and Attenuated by the *Bacillus Fluorescens* is reported by Dr. F. Chevreil in *Le Progrès Médical*. The case was that of a man aged 38 who developed a typical malignant pustule on the face. It was treated by cauterisation and injections of carbolic acid, and the patient was well in 10 days. Bacteriological examination showed the presence of the anthrax bacilli and also of the *bacillus fluorescens* in still larger quantities. A guinea-pig inoculated with discharge from the pustule only died 12 days after inoculation. This fact suggested an attenuation of the anthrax by antagonism between it and the *bacillus fluorescens* and led to further investigations, which fully confirmed the supposition. Mixed cultures showed rapid changes in and disappearance of the anthrax bacilli with development of the *bacillus fluorescens*, and by inoculation of guinea pigs with cultures of the two bacilli in different combinations, the antagonism between them was clearly demonstrated. In the course of the experiments with culture-growths, it was found that the antagonistic power of the *bacillus fluorescens* to the anthrax bacillus gradually diminished.

IN *Le Progrès Médical*, Dr. J. Milhit reports the results of his observations on the Variations of the Opsonic Index in a series of cases of Enteric Fever. These cases are divided into two categories, some of them being treated simply with cold baths, while others received injections of the antityphoid serum of Chantemesse. In an ordinary case of enteric fever the opsonic index is generally found to rise steadily during the first period of the disease, and then to undergo oscillations till the temperature falls and convalescence sets in, when there is a further considerable rise in the opsonic index up to 4 or 5, followed by a gradual decline. With an injection of the serum, however, the early rise is much more sudden, attaining a maximum of 4 or 5 within 48 hours, and this is accompanied by an increased leucocytosis, an increase in the size of the spleen, an elevation of arterial tension, and a greater circulatory activity. The author points out that although this antityphoid serum does not produce the same rapid cessation of symptoms and abortion of the disease as is evidenced in diphtheria with antitoxin injections, these facts show that it stimulates in a remarkable manner the natural powers of reaction of the organism to the disease, and is to be regarded therefore as of considerable therapeutic value. The author's observations on changes in the opsonic index in the course of the disease and accompanying complications are also of interest. Relapses are associated with a fall in the index, followed by a subsequent rise, as the temperature descends again to normal. Hæmorrhages and perforations are always accompanied by rapid falls in the index. In children the opsonic index is not so well marked; it seldom attains a high figure, and does not show such wide oscillations.

AT a recent meeting of the Académie des Sciences, Dr. A. Barillé reports the interesting and important observation that Pasteurisation of Milk Causes a Decomposition of the Soluble Double Salt of Calcium Carbonophosphate into the two insoluble salts of calcium carbonate and bicalcium phosphate. These salts are accordingly precipitated, and the milk is thereby impoverished in regard to its calcium content. The author points out that for infants this loss in calcium salts is a serious matter, as they play so important a rôle in the development of the skeleton and also in the gastric caseation and digestion of the milk. He suggests sterilisation of milk by means of the ultra-violet rays. A large amount of work has been recently done by French authorities on the sterilising power of the ultra-violet rays. MM. V. Henri and G. Stodel have demonstrated the bactericidal effect of these rays on milk. On the other hand, MM. Courmont and Nogier, discussing the subject at the same meeting, point out that whereas these rays rapidly sterilise a limpid fluid like water, their effect is much weaker on fluids containing colloidal substances. Water containing bacilli coli was rapidly sterilised at a distance of 30 centimetres but the addition of peptone necessitated exposure 10 times longer and at a distance 10 times nearer. Similarly it is found that the tetanus toxine is attenuated by the rays much more rapidly in a dilute solution. It seems possible, however, that with further research the ultra-violet rays may prove to be a valuable sterilising agent under certain conditions.

CAMMIDGE'S Reaction, the presence of which is supposed to indicate pancreatic disease, has been the subject of a good deal of research since it was first made known five years ago, but so far the substance which gives rise to the reaction has not been definitely ascertained. It will be remembered that the reaction consists essentially in the fact that the urine only gives a precipitate with phenylhydrazine after it has been boiled with an acid. Such a reaction pointed to the presence of a carbohydrate of complex nature, and Cammidge was of opinion that it was probably a pentosone. Dr. K. Smolenski has endeavoured to throw light on the question, and in a case of cancer of the stomach under his observation he found that the urine caused a deviation of polarised light to the right, reduced Fehling's solution only after heating with an acid, and gave a precipitate with phenylhydrazine only under the conditions laid down by Cammidge. These facts pointed to the presence of saccharose, and this was confirmed by further observations. The phenyllosazone obtained was identical with glucosazone and the optic properties of the urine before and after heating with an acid conformed to the presence of saccharose. The addition of cane sugar to the diet is also said to have caused an increase in the intensity of the reaction of the urine. It would seem, therefore, that under certain conditions cane sugar fails to undergo the usual conversion to dextrose and levulose, and is excreted as such in the urine.

THE Accuracy of the Technique of Opsonic Determination has been several times questioned by various British and foreign bacteriologists, and the method of Wright and Douglas has naturally been the most criticised, as being the most authoritative and the most largely employed of the various techniques suggested. Drs. Glynn and Cox, of Liverpool, contribute to the *Biochemical Journal* a very careful analysis of the possible sources of error, and an estimate of what inaccuracy is still unavoidable in skilled hands. The severest criticisms of opsonic technique hitherto are those of Fitzgerald, Whiteman and Strangeways, published in the "Bulletin for the Study of Special Diseases," Cambridge, in 1907; but Glynn and Cox conclude that Wright's technique is a great deal more accurate than is there suggested, and they believe they can show certain faults in method which satisfactorily account for the vitiated results obtained. Adopting every precaution to ensure perfection of method and to exclude auto-suggestion, they find the average difference between each set of triple indices taken in pairs is 0.15 for tubercle and 0.17 for staphylococcus. They disagree with the critics who maintain that the technique of Wright and Douglas is useless as a means of comparing degrees of phagocytosis; but at the same time they attribute no diagnostic importance to an index between 0.8 and 1.2, even when estimated by an expert, unless the observations have been repeatedly confirmed.

DR. BENJAMIN MOORE protests against the current practice in pharmacological and therapeutic investigation of stating Dosage in Proportion to Body Weight. He points out that, in the main, an adult man of 150 lbs. weight cannot properly be given fifteen times the dose of a drug such as would suit a baby of 10 lbs., but usually about six times only. Further, small mammals such as mice and rats can take very much larger doses per unit of body weight of many tonic drugs than can rabbits, and these again than men or horses. It is to this that he ascribes the failure of atoxyl to cure hypanosomiasis in large mammals, whereas it is easily successful in rats: for the larger animals are poisoned by the drug when its proportion in the circulation is still insufficient to kill the hypanosomes. He proposes that body surface should be the property taken into account in dosage; not body weight; and for practical purposes this may be regarded as the two-third power of the body weight. In the case of substances which act by stimulation or inflammation of surfaces, such as the intestinal tract, the maximum dose is proportional to this factor. Since large animals have less intestinal and cutaneous surface per unit of weight, they can only take up proportionately less drug; and if any remedial substance is manufactured by the surface cells, they can manufacture relatively less than can smaller animals. This new rule may explain why in human therapeutics the dosage for individuals of different sizes does not rise or fall in direct proportion to the weight: the sixteen stone

man may want a larger dose than one of eight stone, but does not generally require twice as much.

THE subject of Miner's Nystagmus was brought somewhat prominently before the profession at the Sheffield meeting by the late Mr. Simeon Snell; but the condition has been known to colliery surgeons for a very long time, and not all of Mr. Snell's views are accepted by those who see many of these cases. Dr. T. H. Butler contributes to the *Ophthalmoscope* a careful account of the symptoms and causation of the disease. He points out that the nystagmus differs from ordinary nystagmus in that it gives rise to the subjective sensation of surrounding objects being in rapid movement and to vertigo. It is essentially a colliery disease, and is not found among ore miners, boiler makers, nor employees in photographic plate factories, all of whom work in semi-darkness, and some of them in positions as cramped as those of the coal miner. In the early phases of the disease nystagmus is elicited only when the eyes are turned up; it is incorrect that the movement ceases when the head is thrown back. Mr. Snell believed that acquired nystagmus is found in other trades, and collected 22 cases, several of them among compositors; but Dr. Butler is convinced that these were not in the least the same disease, and were in fact examples of asthenopia with nystagmoid movements. The disease is not more prevalent in "gassy" mines than in those free from fire damp; therefore the inhalation of gases cannot account for the symptoms. But apparently nystagmus is commoner where Davy lamps are used, that is where fire damp is especially to be feared, an apparent contradiction which the author does not explain.

AS for ætiology, Dr. Butler is against the fatigue hypothesis postulated by Snell, Nieden and Dransart. When severe muscular strain does exist it is manifested, as a rule, by asthenopia, not by nystagmus. Furthermore, though the miner's position may appear cramped, in actual fact he takes good care to make himself comfortable, and does not strain his eyes at all for this reason. This theory also will not account for lateral nystagmus, for it is the elevators which are supposed to become fired by excessive use. The next hypothesis is that the nystagmus is due to excessive accommodation in a bad light; but this the author will have none of, for he says the miner does not accommodate excessively. The supposition that poor illumination accounts for the condition is more probable than the myopathic explanation; but this cannot, the author says, be the sole cause because photographic plate manufacturers do not get nystagmus. The darkness is, however, he says, a powerful adjunct in the production of nystagmus; and the stronger the lamps used, the less trouble is there among the miners from this cause. He concludes, finally, that Miner's Nystagmus—like that of disseminated sclerosis—is a cerebral symptom, the result of the collier's work which in some way not yet understood disturbs the ocular equilibrium so that rhythmic oscillations appear.

HOSPITAL CLINICS.

THE TREATMENT OF PATIENTS AFTER ABDOMINAL SECTION.

By WILLIAM TURNER, M.S., F.R.C.S.

(A Lecture delivered at the Seamen's Hospital, Greenwich.)

GENTLEMEN,—Before I speak of the after-treatment of a patient who has had a laparotomy performed, I must call your attention to the fact that the importance of the care and preparation of the patient, the kind and method of the anæsthetic, and the care of the patient during the operation cannot be over-estimated. Take a patient who has had a clean operation performed, the abdominal wall sewn up, and the bowel not injured—I emphasise that because it is most important—such as for the removal of a fibroid, as a typical example of the kind of case I am referring to. The patient is put to bed, preferably on the back; the head is turned to one side, a pillow is put under the opposite shoulder and another under the knees. A cradle may or may not be used, according to the sensibility of the patient and the type of the operation. A nurse keeps the head over if vomiting occurs, and her other hand should be placed over the bandages to support the wound when straining and vomiting occur; it is sometimes very useful to mark the outside of the bandage with a blue pencil to indicate the position of the wound beneath.

Unless there is some definite indication there is no need to do anything more until the patient comes out of the anæsthetic, when the two symptoms, pain and restlessness, are the ones to be treated. In nearly every case morphia is the best agent here to employ. Doses of not more than $\frac{1}{2}$ grain of morphia can be given to a patient, either just before the anæsthetic is administered, before the patient is moved to bed, or just when coming round from the anæsthetic. The severity of the manipulations and the general condition of the patient determine the best time. It is frequently necessary to delay the administration of morphia until the patient has spoken after the anæsthetic on account of the anxiety of the friends. A disadvantage in giving it early is that it often delays and thereby aggravates the anæsthetic vomiting; the saliva, ethereal vapour, and mucus remain in the stomach, and a considerable amount of gastritis is the result. Perhaps the best routine method is to allow the patient to get the early vomiting over, and then, if uncomfortable, to give morphia. The dose must be quite small, for there is no doubt that morphia increases distension and flatulence; do not repeat it unless absolutely necessary. If the morphia is combined with atropine or strychnine, it considerably obviates this distension; but the disadvantage of atropine is that it increases the patient's thirst. Then the bladder must be attended to, and the patient should pass water within about eight hours of the operation. Some patients can be left longer, even to twenty-four hours; but I think it is unwise, and that the catheter should be used if it is not passed in fifteen hours. In women, especially pelvic cases, this is very important; it is better to run the risk of passing a catheter than to have an atonic bladder wall, and that may even cause death from suppression. The

restlessness and sleeplessness on the first night after operation are often due to this cause, and relief and sleep follow immediately on the passage of a catheter. When the urine is scanty and of very high specific gravity, saline solution with 20 or 30 grains of acetate of potash may be given per rectum. Uncomfortable bandages, or a full bladder, or an awkward position in bed, may account for loss of sleep on the first night. Or the patient may be a drug-taker, either alcohol, morphia, or some hypnotic, and this makes the treatment very difficult indeed.

Is change of position harmful in these cases of discomfort? I do not think so if it is done to the patient and not by him. To be rolled a little on one side often gives relief, or a pillow under the shoulders, or a small one under the middle of the back may help. If these means do not produce sleep, you are bound to try drugs. Thirty grains of bromide given per rectum, dissolved in 3 oz. of water very often acts well. Other drugs which may be given in exactly the same way are trional, chloralamide, chloral, or a mixture of chloral and bromide. If these fail, a morphia suppository, which does not cause anything like the effect on the general condition, may be very useful indeed. Where the patient is very ill from peritonitis, strychnine has an undoubted effect in causing sleep, though it is really given to improve the pulse.

We next come to the question of feeding. As a regular rule one says no food for twelve hours. A little hot water to sip and wash the mouth out with. If great thirst is complained of, saline solution per rectum is the best antidote. After twelve hours the water may be increased in quantity to 2 ozs. at a time; then albumin water is given alternately with the water, always providing that vomiting is not going on. If the patient is still vomiting, nothing in the way of food for two hours. On the second day, if the patient is not vomiting, tea, coffee, meat juice, beef tea, and jelly may be allowed. But, unless the patient is a large milk taker, it is much wiser to withhold milk. This is absolutely contrary to all the teaching in hospitals. It is better to withhold milk until the bowels have acted, as the increase in distension is often most marked when patients have milk. If milk is given, it may be either peptonised (but it is very nasty) or diluted with barley water; then the dilution is gradually diminished until milk is given by itself. On the third day the patient may have toast, which I think is very good, and tea and an egg, a little pounded fish and chicken, as well as the things already mentioned. After that there may be a steady increase to light convalescent diet, usually with a little fruit; and after ten days the patient may be having practically ordinary diet. Pastry and green vegetables are not usually well taken till then. You will notice I have not mentioned anything about rectal feeding; but in an uncom-

plicated case it is absolutely absurd to feed per rectum.

It is wise to get the bowels to act on the third or fourth day. I usually choose the third night for giving an aperient where it is safe to administer one. I never administer an aperient where the bowel has been opened at the operation unless peritonitis is present or imminent. Enemata are the rule in these cases; either simple or with turpentine, or in more obstinate cases one consisting of olive oil, glycerine, and turpentine.

Rest is the most important thing in the treatment of these cases; and by giving an aperient the local rest of the part of the intestine which has been wounded is destroyed, and may prevent the adhesions which you want to form. In the ordinary way castor oil is the best aperient to give in the early morning. Where peritonitis is present or imminent, as after a severe operation for perforation of the appendix where the peritonitis is general, and on the third day there is considerable distension and hardness of the abdomen, nothing answers better than small doses of calomel, $\frac{1}{2}$ grain every hour until ten doses have been given or the bowels have been moved, combining with this hypodermic injections of strychnine, 1-30 grain, or salicylate of eserine 1-100 grain, which has proved of service in some cases.

It is at about this time, the second or third day, that the bandages become tight from distension, the breathing may be hampered, and the patient may become very restless. Loosening the bandage is the treatment, and when the bowels act, it should be tightened up again.

The regular action of the bowels after the first time depends, again, upon the patient. Usually one finds that either small doses of cascara in women—men do not take it at all well, in my experience—or senna pods, liquorice powder, salines, or Apenta water will bring about the desired result. Some patients prefer not to take drugs, and then glycerine suppositories or ordinary enemata every morning are useful.

In the majority of cases it is wise to look at the wound on the fifth day, and remove and change the dressings, which again is contrary to some of the dicta. I think it is more important to make the patient comfortable at this stage than to mind about the risk of undoing the wound, which is nil in skilled hands. The moist hot skin of the back under the bandages and the skin between the legs can be thoroughly washed with spirit, and powdered (of course keeping the wound covered). Stitches which are too tight, or around which there is inflammation, can be taken out. A similar dressing to the original one is put on and the bandages reapplied. On the tenth day the superficial stitches can be removed, a layer of gauze spread well over the anterior wall of the abdomen, and fixed with collodion right down, so as to make a firm support to prevent stretching of the scar. When dry, the bandages are re-applied as before; and care must again be taken that while this is being done there shall be no straining, especially where the abdominal wall is sutured with one layer of stitches. All wounds are by no means

firmly healed on the tenth day. If the stitches have been taken out and the patient suddenly strains, the wound may open with prolapse of the intestine. This is especially so in urgent abdominal operations, where the patient is ill either with acute intestinal obstruction, or intussusception, or something of the sort.

On the 18th day the patient may sit up in bed, may get up on the 21st, and may usually be walking about on the 24th. I do not believe in shortening these periods, as embolism, thrombosis, or stretching of the scar are likely to occur. Also I do not think many patients are mentally fit to go about until the end of the fourth week after a laparotomy.

In the late treatment there are two things in particular to be looked after: (1) the liability to hernia; (2) the liability to adhesions. The precautions against hernia are the accurate stitching of the wound (the material being quite aseptic), and the knots being not too tightly tied; preventing extra strain while vomiting, coughing, etc., by keeping the walls supported by a bandage and belt; and early exercises to get the muscles strong again, and the avoidance of sudden straining—in particular such straining as lifting up a heavy window, or picking up a large can full of water so as to pour it into a basin, or strapping up a heavy box. Adhesions occur when least expected, and it is almost impossible to foresee, in any given case, whether they are going to be present or not. As a rule we find that they are due to leaving a portion of the surface of the peritoneum uncovered, as often happens in the removal of an ovarian tumour or the removal of omentum. Much handling of the intestine may bruise the peritoneum over it; and antiseptics may irritate it and cause adhesions. Where, from any cause, there is a likelihood of adhesions, the injection of saline solution into the peritoneal cavity at the end of the operation is recommended, though not by all surgeons. Ensuring peristalsis is the best way of dealing with and preventing them during the first few months after the operation; and so constipation must be very carefully avoided.

I now come to some of the complications requiring treatment on their own account. Shock, if very severe, is best treated by the infusion of saline solution into a vein, with a drachm to the pint of solution of adrenalin chloride 1 in 1000. Two or three pints of this are injected into the vein, and repeated if necessary, more particularly if the shock is complicated with hæmorrhage. Also combine with this a small dose of morphia. This relieves restlessness, and has some effect on the shock itself. In slighter cases a similar injection of a pint at a time may be given every four hours per rectum. I do not give any stimulants unless the condition is very urgent. If shock is so urgent as to require stimulants before adrenalin solution can be absorbed, then ammonia to smell, brandy, ether, and strychnine hypodermically are probably the best things that can be given.

Now with regard to vomiting. The first vomiting, of course, is good for the patient. But when it goes on during the first twenty-four hours it may distress

and weaken him very much. The cause is nearly always the anæsthetic. A large quantity of hot water, with a teaspoonful of bicarbonate of soda to the pint, will cause first vomiting and then relief. If still persisting, lavage by means of a stomach tube with saline solution, and leaving in a drachm of sub-nitrate of bismuth in suspension, may stop it. Other things that do good are a mustard leaf over the epigastrium, and heat. The Americans especially recommend ice on the abdomen, though we do not do it much over here. There is a list of drugs which begins at one end of the Pharmacopœia and ends at the other; practically every drug has been tried. Americans use inhalations of vinegar, and they speak highly of it. They also give salicylate of bismuth gr. x., calomel gr. $\frac{1}{8}$, and Dover's powder gr. $\frac{1}{4}$, by the mouth. I doubt whether ipecacuanha and calomel, with the patient vomiting from the anæsthetic, is likely to be of use unless you do also what we do, give small doses of morphia to quieten the patient for a time, and afterwards a little solid food and black coffee, to which may be added bromide of sodium gr. x. If vomiting persists to the second or third day you must feed the patient per rectum. I usually give injections of saline and nutrient enemata alternately every six hours, the latter of two ounces of peptonised milk, two ounces of beef tea, two eggs, and twenty grains bicarbonate of soda; which acts very well. After four of these nutrient enemata the bowel must be washed out; then start again. Brandy, of course, can be given either with the saline or with the nutrient enemata. If the vomiting increases on the third day, or recommences then, it must be looked upon as a symptom of severe import, usually due to intestinal obstruction, peritonitis, or, occasionally, uræmia.

Hiccough is occasionally very distressing in the early stages after laparotomy. I have seen many things tried for it, but there are three things which seem sometimes to help. One is to lay a spoon on the back of the tongue, as far back as possible, and keep it firmly pressed there. I think that is reflex. Spiritus ætheris co. and dilute acetic acid have been recommended: a teaspoonful of each in an ounce of water. I do not think anyone knows the cause of hiccough.

Abdominal distension often requires treatment, and the passing of a rectal tube, turpentine or asafœtida enemata—if it were not for the smell I think the latter is preferable to the turpentine—and a firm bandage with light rubbing over the abdomen by the nurse, the regular administration of strychnine, or salicylate of eserine $\frac{1}{100}$ grain hypodermically three-hourly, sums up the treatment of a severe case. If there is no vomiting, but only distension, and there is no other contra-indication, an aperient can be given. Of the aperients, castor oil, calomel, or mag. sulph. may have the desired effect. If the distension is a symptom of peritonitis, then probably your only hope is to treat the peritonitis by operation first. And in a case like that, where there is extreme distension and peritonitis, the operative treatment entails opening and emptying the bowel, as well as treating the peritoneum.

When I spoke of sleeplessness before, it was parti-

cularly with regard to the first night. Some patients suffer from insomnia the whole of the time after an operation; and, of course, the only thing to do is to ascertain the cause and treat it. If it is due to drugs taken before, give doses of the drugs. If it does not appear to be due to anything definite, there are two things which may help. One is warm sponging by the nurse, and the other is facial massage. Otherwise give bromide per rectum, trional or chloralamid. In plain insomnia do not give morphia.

In the treatment of cases where drainage has to be allowed for general peritonitis, the sitting posture has proved to be of great advantage. Then the dressings have to be so arranged as to be easily removed, and they must be changed as often as necessary, usually daily, or even oftener. Plugs usually do not require removal until forty-eight hours after the operation, and then only part is taken out at a time if difficult to remove. Remember to be careful not to leave a piece in for good.

Drainage tubes can, as a rule, be replaced by plugs directly the discharge of pus ceases, usually, in the loins, on the third day. But the tube draining the pelvis must not be removed until nothing at all is got out of it on a piece of ribbon gauze passed down to the bottom. In a bad case such a tube may be in for a fortnight. These places in the abdominal wall where tubes have been are very liable to stretch and cause herniæ, and, unfortunately, may call for a secondary operation. But when the whole wound is left open and all goes quite well, secondary suture can be performed from the 10th to the 21st day. This may produce an excellent scar, with no tendency to hernia at all. In cases where the gall-bladder is drained, the tube can be either tied in with a purse-string suture, or, better, an opening left in the gall-bladder only large enough to take the tube; the tube can then be brought through the dressings and layers of many-tailed bandages and allowed to drain into a vessel by the side of the patient on the bed. Where a Paul's tube has been introduced into the bowel, a thin rubber tube, passing down to a vessel on the floor from the glass tube, is the easiest method, the glass tube itself passing through the dressings and bandages. Remember a Paul's tube cuts out of the bowel in from 24 to 48 hours, and then requires replacing. If the wound is high up in the small intestine the patient starves to death unless the obstruction is removed and the contents passed on again.

In operations on the stomach the after-treatment which I have given you must be modified somewhat, as nothing but a little water should be given for three days, and in some cases the interval should be longer. This, of course, entails rectal feeding for a much longer period than the first twenty-four hours.

Time does not permit me to deal further now with the various points connected with the nursing of these cases, or of the symptoms requiring treatment which mark the onset of complications. But I have tried to put before you the general lines to guide in the treatment of the bulk of the cases. Still, as is the case with all rules, they require to be applied with discretion, and occasionally with very considerable modification.

THE EARLY DIAGNOSIS OF GENERAL PARALYSIS OF THE INSANE.

By CHARLES MERCIER, M.D., F.R.C.P., F.R.C.S.; Physician for Mental Diseases, Charing Cross Hospital, and Lecturer on Insanity in the Medical School.

(Abstract of a Lecture delivered at the Polyclinic.)

THE diagnosis of general paralysis of the insane in its early stage is often a matter of great difficulty. I speak of the pre-paralytic stage. When once the physical symptoms are present there is rarely much difficulty. It is often taken for granted that general paralysis means grandiose delusion, and grandiose delusion means general paralysis. This is not the case; general paralysis may exist and be pronounced and manifest without grandiose delusion, and without any delusion; and grandiose delusion of very exaggerated type may exist quite apart from general paralysis.

The first thing to do when general paralysis is suspected is to examine the pupils, and if the pupillary signs are present, general paralysis may be diagnosed almost with certainty; but these signs are often not found because they are not looked for, and they are not looked for because the suspicious signs, which should send us to look for them, do not arouse suspicion. They pass unnoticed, or at any rate they do not suggest a search for the physical signs of general paralysis. It is important, therefore, to recognise the symptoms that should arouse suspicion; and it is the more important because general paralysis is a progressive disease with a fatal termination, while the diseases for which it may be mistaken are for the most part recoverable.

First and most frequent among the early signs of general paralysis are the moral changes—a moral deterioration. The truthful man becomes a liar, the modest man brags, the sober man takes to drink, the chaste man consorts with loose women. When this change takes place in a man between 40 and 50, we should at once think it may perhaps be general paralysis. Usually it is put down to drink, and often the man has taken for the first time in his life to drink too much. But his drinking is an additional sign of his general paralysis, not the cause of his moral deterioration. Most characteristic among the moral changes is a lack of reticence. He talks freely of his private affairs before strangers, in railway carriages, and public places; he brags of his success in business and laments his family troubles. He laughs inappropriately, or perhaps weeps, in public.

There may be mental changes other than moral, the most frequent of which is forgetfulness; and the lapse of memory seen in general paralysis is quite distinguishable from that of old age and from that of alcoholism. In the latter cases the patient forgets events that have recently happened. He does not remember interviews that he has had, letters that he has written, business that he has transacted, even on the same day. In general paralysis what he forgets is not so much what he has done, as what he has to do. He forgets to keep appointments, to write letters, to transact

business. Then he complains that his mind is confused, that he cannot concentrate his thoughts, that there is a loss of grip and inability to think clearly. These mental failures should lead us to think of general paralysis, and to investigate further.

Almost any form of transient paralysis in a man of the right age should arouse the same suspicion. Ptosis, strabismus, dragging of a limb, giddiness, aphasia, defect of articulation—all may appear as transient features in the pre-paralytic stage of general paralysis; and there may be sensory troubles of the same temporary character. There may be unilateral blindness or deafness, there may be neuralgias or numbness. More frequent is headache. Persistent severe headache, simulating the headache of cerebral tumour, occurs not very infrequently in the earliest stage of general paralysis.

The maladies with which general paralysis may be confounded are numerous. The melancholy form may be confounded with ordinary melancholy, the maniacal and exalted form with ordinary mania and non-paralytic exaltation; but in the ordinary malady the delusions never have the extreme hyperbolic exaggeration of general paralysis, and the affection of the pupils clears up the diagnosis at once when it is present, but it may have to be waited for, and it is not always safe to give a decision on a single interview. The main difficulty is, however, with the insanity arising from long continued alcoholic excess. Of course, there is the history, but even the patient's nearest friends—even his wife—does not always know that he is an habitual drunkard. A history of syphilis or its absence does not help us much, for alcoholics are not exempt from syphilis; and in 20 per cent. of general paralytics, as in 20 per cent. of other syphilitic maladies, there is no history of syphilis. Persistent morning vomiting does not occur except in pregnancy and chronic alcoholism, but it does not necessarily occur in the latter. Most important of all, the pupils in chronic alcoholism become sluggish in their reactions and it may be very unsafe to depend upon them for a diagnosis. The defect of memory is of a different type in the two diseases.

Fortunately two signs remain that are unimpeachable. The first is the result of lumbar puncture. If the cerebro-spinal fluid contain as many as half-a-dozen lymphocytes in the microscopic field of uncentrifuged fluid, the case is certainly para-syphilitic; and with the presence of mental symptoms, general paralysis may be diagnosed with certainty. The other is the Wassermann reaction. If this is positive the malady is either general paralysis, tabes, or syphilitic meningitis. The presence of mental symptoms decides that it is general paralysis.

MEDICINE.

INTESTINAL OBSTRUCTION BY A GALL-STONE.

SYMPTOMS SUGGESTIVE OF URÆMIA.

INTESTINAL obstruction by impaction of a large gall-stone within the bowel is a well-recognised, if rare, condition. The following case serves to illustrate the difficulty that may arise in diagnosing not merely the cause of the obstruction, but actually the obstruction itself.

AN INSTRUCTIVE CASE.

A lady aged 49 came under observation for acute epigastric pain associated with vomiting. It appeared that there had been no previous illnesses of importance, the patient having been perfectly healthy all through an ordinary married life during which she had given birth to three living children and had had one miscarriage. Seven months previous to the acute illness she had had obscure abdominal signs, whose beginning was vague and indefinite; for some while the appetite had been defective and digestion slow and uncomfortable; after each meal there had been a sense of fullness and heaviness, often associated with heartburn and acid eructations.

There had never been any biliary colic, nor even symptoms suggestive of it; no pain in the right shoulder, no jaundice. It was difficult to say even when the slighter abdominal symptoms began to be severe. One night, about six weeks before final admission to hospital, there were acute abdominal pains referred to the epigastrium, accompanied by profuse vomiting, during which, with a sensation of burning heat in the gullet and mouth, the patient averred that she brought up a flood of blood. Nobody else saw this. Next day appetite was fair, and ordinary food was eaten without further hæmatemesis. From this time attacks of vomiting recurred at shortening intervals; at first only some hours after food, but for the four or five days before admission immediately after anything was taken at all.

The patient was a fairly stout woman who was in a state of marked prostration and torpor. She was too languid to answer questions. Vomiting of bile-stained fluid persisted; there had for years past been great constipation, and the bowels had not been opened for three days, although gas was being passed.

The epigastrium was painful, and the pain was increased by pressure, but the parietes were so fat that nothing definite could be felt. The liver did not seem to come below the costal margin, and it was not tender in the least. The urine was scanty, and it contained a moderate quantity of albumen. The heart and the lungs seemed natural. There was no blue line upon the gums. The knee-jerks were present, and there were no Argyll-Robertson pupils. The pulse rate was 96 and the temperature normal. Large enemata were given, and a feeble evacuation of faecal matter resulted. There was no

visible peristalsis, and gas was repeatedly passed per rectum.

THE CLINICAL COURSE.

Admission having been on the 8th, there was little change to note for some days and the diagnosis was quite obscure. By the 13th the general appearance of the case suggested uræmia. There was complete torpor, with occasional effortless vomiting and occasional periods of sufficient intelligence for the patient to complain of colicky abdominal, chiefly epigastric, pains lasting a few minutes at a time. By the 15th, as the result of further enemata, an abundant motion was obtained. On the 16th, apathy persisting and the cerebral symptoms now being the chief ones to attract notice, lumbar puncture was performed, and some 8 c.cm. of cerebro-spinal fluid removed. There was nothing distinctive about the fluid itself, either chemically or microscopically, except that it contained more urea than usual, a point which seemed to favour the diagnosis of uræmia; but for several hours after its removal there was a decided improvement in the mental condition, the torpor diminishing and voluntary speech being carried on for some time. During that night, however, the vomiting recurred with increased violence, with severe but ill-localised abdominal pains, and the patient died.

FINDINGS AT THE AUTOPSY.

At the autopsy the small intestine was found to be enormously distended with gas, and, about a foot above the ileo-cæcal valve two hard bodies were felt fitting tightly within the lumen, though with firm digital pressure they could be pushed onwards. On opening the bowel these two bodies were found to be gall-stones, the smaller measuring $1\frac{1}{2}$ inch in length and $1\frac{1}{2}$ inch in diameter, being behind a larger one 4 inches long and 1 inch in diameter. They were composed almost entirely of cholesterolin. The gaseous distension of the bowel began immediately above the site of these gall-stones so that they were clearly the cause of intestinal obstruction.

The gall-bladder was practically non-existent, or rather it was lost in a mass of dense adhesions which bound the under surface of the liver to the duodenum. There was a large fistulous communication between what had formerly been the gall-bladder and the duodenum just beyond the pylorus; clearly it had been by ulceration directly into the duodenum, and not by passage along the cystic and hepatic bile ducts that the gall-stones had found their way into the bowel. The other organs all seemed perfectly healthy, notwithstanding the misleading occurrence of albuminuria during life; the kidneys seemed to be natural both to the naked eye and microscopically.

SOME POINTS OF INTEREST.

Two points at least merit particular attention in the above case. These are:

I. The insidious development and course. During the time the gall-stones were forming there were no symptoms distinctive of biliary mischief. It is most important to realise how much more common gall-stones are than are cases of typical biliary colic. The absence of real colic, and the absence of jaundice, are explained by the fact that the stones never engaged in any of the ducts, but passed directly from gall bladder to duodenum near the pylorus, and this also explains why the pain complained of was in the epigastrium and not over the gall-bladder. During the last phase when the big stones were passing along the intestine the obstruction was never complete enough to make the diagnosis clear: flatus was passed each day, and at intervals sufficient faecal matter got past the gall-stones to lead to a definite

motion coming away per rectum with enemata. It is well enough known that the small intestine is shaped like a very elongated funnel, becoming progressively, though very slowly, narrower from the duodenum above to the ileo-cæcal valve below. Hence it is that gall-stones, when they become impacted in it, are nearly always stuck within three feet of the ileo-cæcal valve.

II. The fact that the oliguria, the albuminuria, and the state of somnolence or torpidity were so striking that an erroneous diagnosis of uræmia was made. The patient was a stout woman of the gall-stone age, and this perhaps should have made the diagnosis easier. Nevertheless it is a striking fact that the great majority of cases of intestinal obstruction by impaction of gall-stones remain undiagnosed except either by exploratory laparotomy, or by autopsy, or by finding the gall-stones ultimately in the faeces.

COMPOUND LIQUORICE POWDER IN DIABETES.

THERE is little doubt that the Pulvis Glycyrrhizæ Compositus of the British Pharmacopœia is a very valuable laxative, easy of use, effective, and free from danger. Nevertheless it consists very largely of sugar, so that its use may be contra-indicated, as Dr. Balmanno Squire has pointed out, in a great many cases, notably in diabetes mellitus, gout, and obesity, as the following formulary shows:—

Senna	2 parts	} 4 parts.
Fennel	...	...	1 part
Sulphur	...	...	1 part
Liquorice	2 parts	} 8 parts.
Sugar	...	...	6 parts

Dr. Squire has pointed out that those who have attempted to remedy the difficulty have restricted themselves to the simple process of leaving out the sugar and retaining the liquorice, senna, fennel, and sulphur, thereby reducing the dose to half that which is official. The difficulties of this plan, however, are threefold. First, it gives rise to two preparations of the same name differing widely as to dose. Secondly, the amended preparation still

contains sweet-stuff—liquorice—to the extent of one-third of its weight. Thirdly, the amended preparation is not at all readily miscible with water, owing to the absence of the sugar. Called after the Christian name of its inventor, Balmanno's powder obviates these difficulties by retaining the two parts of senna and the one part each of fennel and of sulphur, and by replacing the two parts of liquorice and six parts of sugar by eight parts of a powder composed of sweet almonds and gum acacia in the proportion of eight parts of almonds to one of gum. The omission of the liquorice hardly interferes with the laxative effect.

The almonds, having first been blanched and dried, are triturated in a mortar to a fine powder. The gum, likewise powdered, and the senna, fennel, and sulphur are then added, and the product is a very presentable preparation that is far less mawkish to the taste than is pulv. glycyrrhizæ co., is more miscible with water, has the same dosage, and yet contains no sugar that might be deleterious in a diabetic case.

OLEO-BRASSIDATE OF MERCURY INUNCTIONS.

COLZA oil contains erucic acid amongst its other constituents, and erucic acid can be isomerised into brassidic acid. The latter can then be treated with a mixture of mercuric oxide and oleic acid, with the result that a substance known as mercuric oleo-brassidate is produced. This is readily soluble in soap solution, and it can be spread and applied to the skin without giving so greasy a feeling as ordinary ointments do; moreover, it is said to be very readily absorbed, so that it is of use for purposes of mercurial inunction in syphilis and other affections. Doses up to as much as 270 grains in a day have been applied daily or every other day, and stomatitis has occurred in one case only even when as many as thirty applications have been made. The method of inunction is simply that of steady

persistent rubbing without any force or severity. The preparation is equally serviceable as a local antiseptic application in conditions such as pediculosis vestimentorum, scabies, tinea cruris, and other similar affections. One great advantage in the mercuric oleo-brassidate is its ready absorbability, so that linen and underclothing escape that oily saturation that is almost unavoidable when ordinary ointments are used.

BOOKS RECEIVED.

W. B. SAUNDERS CO.

"Dietetics for Nurses"—2nd edition, by Julius Friedenwald, M.D.

"Primary Studies for Nurses," by Charlotte A. Aikens.

"Obstetrics for Nurses," by Joseph B. DeLee, M.D.

SURGERY.

THE TREATMENT OF WHITLOW.

MANY varieties of whitlow are met with, and they are sub-divided according to the anatomical layer in which the infection starts. The least serious is the subcuticular variety, in which an abscess forms under the skin itself. This is generally found in the terminal phalanx as the result of infection of a superficial wound or abrasion; it forms a raised, dead-white, or yellow, fluctuating swelling, which is tender, but does not throb. The treatment consists of incising the swelling at an early moment; some surgeons cut away all the skin which has been raised from the subcutaneous tissue to the extreme limit of the abscess. This is not a good proceeding. The dead skin forms an admirable protective covering for the damaged area, while the new epidermis is being formed underneath, and it can easily be removed later, when the process of regeneration is near completion. But if this skin is removed early, a new area exuding serum is exposed, which sticks to the dressings, and each time these are removed the healing process is retarded.

A subcutaneous whitlow is a much more serious affair. It results from a prick or stab with a sharp but septic implement. A rusty nail is responsible for a great number of them. This is also usually found in the terminal phalanx since that is the portion of the finger most liable to injury. The whole of the subcutaneous tissues of the pulp of the finger become acutely inflamed. The end of the finger is enlarged, the skin is shiny and red, and excessively tender if touched. This variety is excruciatingly painful, a fact which is due to the intimate way in which the skin is held down to the subcutaneous tissues in this region. The pus is therefore retained under tension, a circumstance which is always associated with great pain. The pain is increased by anything which causes engorgement of the vessels of the finger, such as keeping the arm in a dependent position or the increased warmth of bed. The patient often complains of an intense throbbing at night, which prevents him from sleeping at all. It is quite astonishing to what a great extent the general health of the patient may be affected by an apparently insignificant focus. But the constant pain and the insomnia are capable of affecting the patient to a serious degree unless relief is afforded by early surgical interference. Further than this, the infection spreads along the lymphatics of the arm, so that these become visible as angry-looking pink streaks, and the epitrochlear and axillary glands may become enlarged, and finally suppurate.

The obvious duty of the surgeon in such a case is to allow free exit to the toxins by incision. The mistake that is usually made is that an insufficient incision is made in the first place in the hope that the infection will subside. If possible, a general anæsthetic should always be given (gas is generally sufficient), and an incision should be made which is not only free but ensures adequate drainage. An excellent way of doing this is to make two slightly elliptical incisions and to remove entirely the inter-

vening portion of skin. This will effectually prevent the edges of the wound from falling together and so locking up the pus again. Fomentations should, of course, be applied. The writer prefers to use gauze for this rather than the lint which is usually employed. Even then a second, or possibly a third, operation may be necessary.

Occasionally the infection travels deeply towards the phalanx, and periostitis and partial necrosis of the bone itself occurs. An incision must then be made right down to the bone, and the necrosed portions be removed by scraping. When this occurs the terminal joint of the finger often looks so completely disorganised that amputation appears to be necessary. This should never be done with undue haste. The ultimate result of treatment by adequate and continued drainage is nearly always successful, unless the entire phalanx has necrosed, and the deformity left is surprisingly little.

A very troublesome form of whitlow is the perionychial. Here the infection starts at the base of the nail, where the skin is particularly liable to abrasion. An abscess forms round the base of the nail and underneath it, and the nail itself dies wholly or in part. But here, again, the trouble is mainly due to inefficient treatment at the outset. It must be recognised that the nail will die, and it is better to remove it completely than to allow it to slough off of its own accord. There are two distinct advantages in doing this—the new nail is less likely to be deformed, and free and immediate drainage is given to the abscess. If granulations have already formed on the matrix, these may be scraped and touched with silver nitrate.

Sometimes the infection invades the tendon sheath (thecal whitlow), and the whole finger is swollen as far down as the metacarpo-phalangeal joint. But a subcutaneous whitlow may also spread down the whole finger, and great care is therefore required in operating not to convert what is only a subcutaneous whitlow into a thecal one by opening the sheath. But if the sheath is already involved it must be laid freely open, since it is only by doing this that the life of the tendon can be saved. The prognosis is, however, never good; in more than half the cases one or other of the flexor tendons dies and sloughs away, leading to great impairment of the use of the finger. A thecal whitlow in the little finger or thumb is more serious than in the other three, because the tendon-sheath is continuous in these digits with the palmar bursa, which thus may become infected.

It should be added that the general health of the patient should be attended to. A tonic composed of quinine and iron is of benefit, and the bowels should be kept freely open. It is also advisable to give a vaccine made from the organism found in the pus, which must be cultivated for this purpose. There can be little question that this treatment increases the patient's resistance to the infection and helps him to overcome it.

DISEASES OF CHILDREN.

ISTHMUS STENOSIS OR CO-ARCTATION OF THE AORTA.

SOME of the rarer forms of congenital mal-development of the heart or circulatory organs deserve consideration for the simple reason that they are present at birth, and frequently diagnosable then or in the first few months of life. The peculiar mal-formation formerly known as Co-arctation of the Aorta, but in more recent years better named Isthmus Stenosis, comes under this description. In 1900 there were over 100 cases on record, divisible among males and females in the proportions of 7 to 2. The isthmus of the aorta is that portion of the aortic root between the fourth and fifth branchial arches, that is, the portion between the origin of the subclavian artery and the entrance of the ductus Botalli into the aorta. During foetal life very little circulatory strain falls on this portion of the aorta, and it remains thin and narrow. After birth it develops rapidly. The whole of this part of the aorta may be absent; or it may be reduced to a fibrous cord for about one centimetre; or there may be a double constriction, with a dilated intervening section; or it may be pervious, but the lumen as small as that of a No. 1 catheter. If it is pervious the condition is spoken of as Incomplete Co-arctation. The majority of cases are of this type. Only about 15 of the complete variety are on record, and sometimes the term co-arctation is limited to the complete variety.

The ductus arteriosus may supply or give rise to the descending aorta, owing to this failure of development. If the isthmus aortæ is absent, the transverse and descending aorta are completely separated. In still rarer cases the ductus is also absent. The constriction of the isthmus may be sudden or gradual. The vessel is usually dilated or funnel-shaped on the proximal side, and the artery beyond is thin and small in calibre.

If the ductus is absent in these cases, the collateral circulation is carried on by the anastomoses between the upper intercostal arteries from the second part of the subclavian with the first aortic intercostals; and by those of the posterior scapular arteries from the second part of the subclavian, the subscapular branches, and the internal mammary arteries. Most commonly the internal mammary arteries are the most dilated, forming tortuous pulsating cords under the skin, and, together with the anterior and superior intercostal, subscapular, scapular and external thoracic arteries, anastomose with the epigastric and the posterior intercostal arteries.

Cases of mild grade develop no collateral circulation, but the left ventricle is hypertrophied and the aortic second sound accentuated. The ventricle, in more serious cases, eventually fails to stand the strain of the anastomotic circulation, and death results from cardiac failure.

Isthmus stenosis is often associated with valvular and arterial anomalies, and other congenital mal-formations—*e.g.* patent ductus; the innominate and common carotid, or the left subclavian and common carotid, arising from a single trunk;

irregular origin of the vertebral arteries; transposition of the heart; patency of the undefended space; secondary aortic valve disease, or only two aortic cusps; or defects such as hare-lip, cleft palate, hypospadias, and deformity of the lower limbs. The supply of blood to the upper limbs may be quite normal; and the stenosis limited to that part of the aorta immediately above the ductus or just where the ductus enters.

The effects on the circulation develop gradually, and the lesion, if slight, will not be diagnosed in early life. Later on, it gives rise to many thickened and tortuous arteries under the skin; excessive pulsation in the arteries of the head, neck and upper extremities; exaggerated radial pulses; murmurs in the arteries of the neck, upper intercostal spaces, and all over the precordium. The murmur is loudest over the manubrium. The aorta bulges forward in the neck, and there may be dulness, thrill and pulsation in the second right interspace. The pulse in the abdominal aorta and the femorals, etc., is feeble or absent. If the stenosis is incomplete, a systolic murmur may be heard over the descending aorta between the scapula and the spine. Schlesinger described congenital stenosis of the abdominal aorta in a woman aged 31, in whom a loud whirring systolic murmur was heard from the sixth dorsal vertebra downwards into the femoral arteries; the pulse being weak in the femorals and hardly felt in the arteries of the foot. This was possibly an instance of isthmus stenosis. In a girl, aged five weeks, under the writer's care there was no cardiac murmur and no lividity, except in occasional attacks and on crying. Death was due to capillary bronchitis. The aorta gave off normal vessels and then abruptly narrowed at the isthmus. The ductus was patent and much dilated, so that the aorta seemed a normal continuation of it; and the ventricular septum was patent in the usual situation. The right ventricle was thick-walled and the left was both small and thin-walled. This was a simple case of stenosis which was compatible with life, had it not been for the attack of bronchitis. Some of these patients may live a long time. One of Raynaud's lived to 92. The average duration of life is 30 years, possibly much less, for cases in very early life are apt to be overlooked and not included. Symptoms may be slight or absent, perhaps limited to dyspnoea on exertion, unless there is secondary cardiac failure. In a navy under the writer's observation many years ago there were no symptoms whatever, but the arterial dilatation and tortuosity were very marked.

They are particularly interesting on account of the difficulty in diagnosis and prognosis. It may be stated in general terms that the prognosis varies inversely as the degree of stenosis, and directly as the completeness of the collateral circulation. If there is only a moderate degree of narrowing, enough to render the pulsation in the arteries of the lower limbs a little feebler than those of the upper limbs, it is likely that life may be prolonged to the usual term.

LARYNGOLOGY AND RHINOLOGY.

FRACTURES OF THE NOSE.

INJURIES of the nose, with fracture of the cartilage or bone, are of considerable importance in practice, for they unite so rapidly that, unless promptly treated, they are almost certain to result in permanent deformity. It is important to remember that, while only severe fractures cause external deformity, a marked deflection of the septum may result from comparatively slight trauma, and may produce nasal obstruction and all its sequelæ although accompanied by no change in shape of the external parts of the nose, and that this fracture of the septum is to be detected only by intranasal examination. Again, it must not be forgotten that deformities resulting from such fractures are almost impossible to correct satisfactorily.

The part most frequently damaged is the triangular cartilage of the septum; next in frequency, though a considerable way behind, come the nasal bones; the perpendicular plate of the ethmoid is seldom broken, and the vomer practically never.

THE TRIANGULAR CARTILAGE.

The triangular cartilage is most frequently broken in one or other of two directions, either about an oblique line parallel to the upper border of the vomer, or about a more or less vertical line well forward in the nose near the junction of the vestibule with the cavity of the nares proper. In the latter case the septal projection is situated at the narrowest part of the nares, which corresponds to the groove behind the ala nasi, and is therefore the more obstructive; frequently that portion of the septum in front of the fracture is so deflected as to look almost forwards, and to be quite noticeable to the patient and his friends. The oblique line of fracture, parallel to the edge of the vomer, produces the well-known ridge or "spur" running from the floor of the nose just behind the vestibule in a direction backwards and upwards. Fractures of the septum often leave behind very considerable thickening, so that obstructive knots or bosses project into both nares. Not infrequently the cartilage is fractured in both of the positions described above, and the entire area between the two lines of fracture is then pushed over to one side. When the cartilage is much deflected, its anterior edge is often dislocated from between the inner limbs of the two lower lateral cartilages, and projects into the nostril on the side opposite to that towards which the main part of the cartilage is displaced; that is, like the edge of a cup, it appears on the side of the concavity. In addition to these fractures, the septal cartilage may be dislocated from its attachment to the vomer; this accident gives rise to the appearance of an oblique cartilaginous ridge upon the side of displacement and, on the opposite side but at a lower level, a similar ridge due to the projection of the edge of the vomer.

THE NASAL BONES.

While many deflections of the septum are, in all probability, not traumatic, it may be said that all

cases associated with deformity of the bridge are the result of injury. Great force may, of course, smash in the nasal bones and break them in any direction, but the commonest fracture due to a blow is a transverse fracture through the lower third of the bone, the upper third being supported by the nasal spine of the frontal bone and the middle third by the perpendicular plate of the ethmoid, in addition to which the upper part is considerably the thickest. One nasal bone only is generally broken, while the septal cartilage is also fractured and displaced towards the side opposite to the fractured nasal bone. This gives rise to the very characteristic deformity, for the depression of the broken fragment causes the entire bridge of the nose to appear deflected towards the opposite side together with the tip of the nose, which is carried over by the deflected septal cartilage. If the septum is not much distorted, the bridge of the nose appears to curve to one side and return towards the middle line at the tip. It is in association with fracture of the nasal bones that fractures of the perpendicular plate of the ethmoid occur, but any obvious fracture or displacement in this region is decidedly rare.

TREATMENT.

Fractures of the nose are in all probability always compound, but they nevertheless unite with remarkable rapidity, and septic infection and necrosis are very uncommon. It is a peculiar fact that hæmatoma of the septum is almost unknown in adults, but is quite common in children after injury. It is always associated with fracture of the septum so that the collection of blood bulges into both nares beneath the muco-periosteum. The proper treatment of this lesion is to open it by a free incision on one side, clear out the clot and drain the cavity freely. The last object is best effected by snipping away a little of the mucous membrane backwards from the incision, for a drainage tube will not keep in position. The little operation is easily performed under cocaine. Immediate incision is recommended for the following reasons: absorption is slow and incomplete, and leaves behind considerable obstructive thickening, suppuration is very apt to ensue, in which case there is great danger of a falling in of the bridge just below the nasal bones, causing a very unsightly deformity; and, finally, it is impossible to tell whether the fractured septum is displaced until the hæmatoma has subsided, by which time the fragments will have become firmly consolidated.

In cases of fracture with displacement, the septum must be replaced under anæsthesia as soon as possible after the injury with a pair of flat-bladed septum forceps, such as Walsham's; it is then kept in position by means of a splint. The best form of splinting is made from a piece of solid red rubber sheeting, which can be obtained in various thicknesses, boiled before use, and cut to the required size and shape at the time; the accompanying

diagram shows the proper shape; the narrower end looks forwards to the nostril. It is carried into the nose on a nasal forceps until it just reaches the posterior nares, as ascertained by a finger in the



DIAGRAM SHOWING THE SHAPE OF A RUBBER NASAL SPLINT.

nasopharynx, and its anterior end should lie just within the nostril. It is usually only necessary to use a splint in one nostril, on the side of the displacement, and it should be kept in for eight to ten days. It can be kept clean by using a nasal lotion with a

syringe provided with a fine nozzle which can be introduced on either side of the splint. A depressed fracture of the nasal bone can be raised by introducing a stiff probe into the nose, or by grasping it with the septal forceps, one blade in the nose and one outside, the latter being protected with rubber tubing. It is often, however, extremely difficult to keep this fragment in position if the depression tends to recur; the splint, made of rather thin rubber sheeting, and of a somewhat deeper shape than usual, is frequently effective. Gauze packing should be avoided as it quickly becomes foul, and shields moulded to fit over the bridge are generally useless, as they have no power to raise the depressed fragment. It is sometimes necessary to hold the fragment up by means of a stout hare-lip pin driven through the bridge at its base, a piece of indiarubber being put over each end and held together with steady pressure by tying a silk thread over all with a figure of eight.

DERMATOLOGY.

ERUPTIONS DUE TO ANTIPYRIN.

ANTIPYRIN is a drug which is often taken by patients for minor ailments without advice from a medical man, and it is well to bear in mind that it is capable of giving rise in some persons to various forms of skin eruption. There are three principal types of eruption produced by the ingestion of antipyrin. One is a scarlatiniform erythema, accompanied by burning and itching, often involving the mucous membrane of the lips, mouth, and throat, frequently with some fever, and followed by desquamation. In other cases there may be a morbilliform rash, consisting of dusky red, irregularly rounded blotches, which may be almost generalised, or may be situated mainly on the limbs. This eruption may appear in the same patient every time the drug is taken. It comes out quickly and disappears slowly. A third form of eruption has been called "fixed erythema," and it may consist of a

single patch, or at most a small number. The eruption appears from half-an-hour to a few hours after the drug has been taken. The patches are rounded or oval, red, infiltrated, raised, and sometimes even bullous. The lesion fades slowly in the course of several days or a week or more, leaving behind a pigmented macule, which may remain for many months. A striking feature of this form of "fixed erythema" is that at every fresh attack the patches appear exactly upon the same area, although in the course of time, if the drug be continued, fresh patches may appear. After several attacks the pigmentation becomes altogether indelible. In some few instances gangrene of the patch has occurred. In the presence of an eruption of rounded, infiltrated patches, of sudden origin, and with tendency to recur in the same spots, one should think, therefore, of antipyrin.

VACCINAL ERUPTIONS.

THERE are several eruptions, such, for example, as eczema and Lichen urticatus, which are often wrongly put down by parents to the effects of vaccination. There are, however, certain forms of erythematous eruption which may be correctly ascribed to this cause; but they are not of common occurrence, and they are for the most part transitory and harmless. They may be regarded as analogous to similar eruptions which may occur as the result of the administration of certain drugs, or of serum or vaccines, or from absorption of food poisons. They may be scarlatiniform in type, morbilliform, roseolous, urticarial, or mainly limited to the limbs and simulating erythema multiforme. The erythematous eruption is often more intense on the limb about the vaccination sores, and thus may suggest erysipelas; but the presence of a less intense eruption on the trunk and limbs negatives this diagnosis. These eruptions usually appear while the vaccine pustules are at their acme, and subside in the course of a few days. There

is a second group of eruptions which may complicate vaccination, all of which are to be avoided if proper precautions are taken. The infection of impetigo, of erysipelas, or even of syphilis might be introduced at the time of inoculation, but with calf-lymph and with antiseptic precautions these complications may be said not to occur at the present time. After the vaccination pustules have developed, there is again opportunity for infection with pus-organisms, and impetigo or erysipelas do sometimes develop, though usually only among the very poor. An accident which sometimes happens, though rarely, is re-inoculation of vaccine at a different site. This is possible up to the ninth or tenth day after vaccination. Instances of reinoculation have been recorded on the lesions of eczema, of varicella, of herpes zoster, and of impetigo. Accidental inoculation of a parent or nurse, often on the face, is not very uncommon. Possibly some of the cases of so-called generalised vaccinia may have been instances of re-inoculation.

MEDICAL ANTIQUITIES.

THE MYSTERY OF THE BORGIA POISON.

TRADITION has linked the name of Borgia with lurid stories of crime and secret poisoning mingled with the romance of the Middle Ages. Much has been written concerning this powerful family, which came into notoriety in the time of Pope Calixtus III. about the year 1455. From recent research into the chronicles of the period it would appear that some of its members were not so black as tradition has painted them, and many of the crimes attributed to them cannot be altogether proved. But few traditions are without a germ of truth, and there is little doubt that some of the Borgias were guilty of sinister deeds, which were only too common in the times in which they lived.

The family was of Spanish origin, and migrated to Italy, the first famous member being Rodrigo, who was born in 1431. He first became a soldier, but afterwards, through the influence of his relative Calixtus, entered the priesthood, and finally rose to be the head of the Church under the title of Pope Alexander VI. He had five children by Vanozza de Cattanei—namely, Pier Luigi, who died in infancy, Giovanni Duke of Gandia, Giffredo Count of Cariati, Cesare, afterwards Duke of Valentinois, and Lucrezia, who eventually became Duchess of Ferrara.

While Lucrezia was but fifteen years of age her father, then Cardinal, betrothed her to a Spanish gentleman; but on obtaining the pontificate he broke off the engagement, with the evident object of marrying his daughter to a man of higher rank, and on June 12, 1493, Lucrezia was married to Giovanni Sforza, Lord of Pesaro. The marriage was not by any means a happy one, and at the end of four years it was dissolved by the Pope, who had other motives in view, for he soon arranged a marriage between Lucrezia and Alfonso Duke of Bisceglie, a natural son of Alfonso II., King of Naples. This marriage took place in 1498. Soon after the birth of her first child, the Duke, her husband, was attacked by several men and severely wounded. Lucrezia is said to have nursed him back to health, but in her absence the Duke was murdered, it is said, at the instance of Cesare Borgia, his brother-in-law.

After her husband's death Lucrezia retired for a time to Nepi. On her return to Rome she appears to have acted as private secretary to her father the Pope, but in about twelve months' time her betrothal to Alfonso of Este, the elder son of the Duke of Ferrara, was announced.

Lucrezia has been accused of being guilty of the worst possible crimes, including that of secret poisoning, but there is practically no historical proof of the truth of these traditions. There is little doubt that many of the infamous actions of her brother Cesare were reflected upon her. On December 20, 1502, the marriage of Lucrezia with Alfonso of Este was performed by proxy, and she shortly afterwards left Rome to take up her residence in Ferrara.

In the summer of the year 1503 Pope Alexander VI., Lucrezia's father, died under mysterious

circumstances, which some chroniclers attribute to poison, while others declare his death was due to a tertian ague. Muratori quotes many authorities to prove that the death of Alexander was not caused by poison, and the balance of evidence certainly seems in favour of the theory that, despite all his crimes, Alexander VI. died from a natural cause, which was probably a fever of virulent type.

It is reasonable to assume that many an individual whose death is said to have been due to poison, merely fell a victim to one of the diseases that were ever rife in the cities in the Middle Ages, which arose mainly from the insanitary conditions under which the people lived.

An inspection of many of the old Italian palaces will confirm the opinion, that typhus and other virulent forms of fever might have been readily contracted under the conditions in which their inmates lived, with a total lack of proper ventilation and ordinary sanitary necessities. It is true that many persons accused of poisoning did under torture frequently admit their guilt, but such confessions must generally be regarded as unreliable.

At the time of his father's death Cesare Borgia was sick in bed, his illness, it is said, being caused by swallowing a portion of the poisoned sweetmeats which cost his father his life. Cesare, it is related, partook of the poisoned sweetmeats in error, and omitted to carry out the advice of Macchiavelli always to carry an antidote with him. More probably he was suffering from an attack of the same fever which his father had contracted.

His death was lamented at least by one person, and that was his sister Lucrezia, who at once set out for the Monastery at the *Corpo di Cristo* to offer prayers for his soul, where she remained two nights.

One or two entries in the book of her household expenses are not without interest. In 1507: "To Maestro Ludovico, physician to her Highness, 110 lire for the balance of his salary." "On the 31st of December, 240 lire as a year's salary for her Highness's physician, Maestro Ludovico, at the rate of 20 lire a month." Surely a very modest stipend for a physician to a Duchess?

Patroness of poets and painters, Lucrezia made herself popular in Ferrara. In the Library of Modena is a list of her magnificent jewels which she sold to free her husband from the debts he contracted during the wars in defence of his territories. Many of her letters, still extant, show that during these troublous times the relief of the poor, sick, and needy was Lucrezia's constant care. She died during her confinement on June 21, 1519. The accouchement had been long and difficult, and the officers and servants of her household were clustered at the foot of the grand staircase leading to her room. Great fears were entertained as to her recovery, and they waited in breathless silence for every sound from the apartment. At length Maestro Alberti, the Court Apothecary, was seen

descending the staircase with a jug in his hand. All pressed forward to ask him where he was going. He replied significantly, "To get some rose-water to wash the body of the Duchess."

According to tradition, the Borgia family are credited with the knowledge of a secret poison said to be of a specially potent type, which they employed to remove from their path any who opposed them. Many stories are related of this celebrated venom, and some early writers go so far as to record the method of its preparation. According to one chronicler, it is said to have been prepared by cutting open a pig, powdering the carcass thickly with arsenic, after which it was left to decompose. The liquid collected from the putrefying mass was then collected, and formed the substance used. Another states, a bear was killed, then cut open and treated in a similar manner, and the liquid that dripped from it formed the poison.

This method of preparing a venom was very probably used by some Italian poisoners, and was known at that period. The combination of the animal poison contained in the products of putrefaction, together with arsenic, would no doubt furnish a venom of a very powerful nature, but whether the Borgia family ever used such a poison there is no evidence to prove.

In connection with the Borgia poison there is a curious story that the secret of its preparation perished with the Duc Riario-Sforza, who died in Paris about fifty years ago. Before his death, one evening at the opera, the Duke confided to a distinguished critic, who occupied the neighbouring stall, that he still possessed the secret of the famous poison, although for centuries it had lain idle in the family archives. Its composition was, he added, simpler than was generally supposed, and not long afterwards he told his friends that, feeling age advancing and having no direct heirs, he had thought it best to burn the recipe lest it might fall into bad hands.

Baron Corvo, in his "Chronicles of the Borgias," scouts the idea that the family possessed any such secret, and denies that the venom ever existed. The probability is, that if the Borgias ever found it necessary to use a poison for nefarious purposes they employed arsenic, which was commonly used in Italy at that period. The fact that Cesare Borgia's signet ring, which is still in existence, contains a secret receptacle, which may easily have been used to carry arsenic, goes far to substantiate this conjecture, and is the strongest evidence we have that he at least used some poisonous substance to further his evil designs.

PRACTICAL NOTES ON DIAGNOSIS AND TREATMENT.

The Operation of Prostatectomy.

If a patient near 70 years has and has had for some time well marked symptoms; if the prostate on rectal examination presents a bi-lobed bulging and is not hard; and if the organ examined bimanually under an anæsthetic is large: then operation is indicated. On the other hand, if the patient is near 60, and has had symptoms only a short time; if the prostate is small both to rectal and bimanual examination: then I am inclined to hold my hand.—*Mr. Cuthbert Wallace.*

Lichen Plano-Filaris.

THIS is a very stubborn lesion to treat, but a remarkably good result has been reported when salicylic ointment was applied externally and a mixture containing phosphoric acid and strychnine was given by the mouth. In certain cases of lichen planus, also, benefit follows the administration of phosphoric acid, even when the remedies usually recommended have failed.—*Dr. Agnes F. Savill.*

Preparation for Curettage.

CURETTAGE should be carried out with the most scrupulous antisepsis. The chief point in an aseptic curettage is the preparation of the vulva and vagina by scrubbing each with sterile wool swabs with ether soap followed by lysol solution. No amount of douching will make the vagina aseptic, for the fluid simply runs in and out without reaching the folds. After the operation no daily douching should be permitted, for this does no good, and may be a potent source of re-infection of the uterus.—*Dr. T. G. Stevens.*

Calomel in Nephritis.

THERE is a prevailing impression that mercurial preparations should not be prescribed in cases of kidney disease. It is probable that this fear is overstated. Provided that the patient is closely watched and that every 24 to 48 hours a saline purgative is administered, calomel is often effectively prescribed for the œdema of chronic parenchymatous nephritis.

Infantile Diarrhoea.

APART from the acute summer diarrhoea of infants many infants and children suffer in the warmer months of the year from a simple though troublesome form of looseness of the bowels. After a preliminary dose of castor oil it is sufficient to order a diet of boiled milk and thin arrowroot, while for medicine nothing is better than 1 to 3 grains of zinc oxide with a few minims of paregoric given in some syrup and mucilage.

Painless Treatment of Boils and Carbuncles.

APPLY a pledget of cotton soaked in carbolic glycerine, and cover with gutta percha tissue and a bandage. As soon as pus shows gently turn back the epithelium and re-apply the carbolic glycerine. Upon the appearance of a slight cavity introduce some of the glycerine by means of a syringe and again cover as above described. In two or three days the slough separates, and after one final poultice of glycerine the cavity speedily closes, with the minimum of scar, under any simple dressing.—*Dr. A. Ogier Ward.*

POST-GRADUATE MEDICAL SECTION.

THE IDEAL GRADUATE STUDY INSTITUTION.—WHAT GERMANY HAS DONE.

III.—THE KAISERIN FRIEDRICH HAUS.

"'Tis a house indeed, a very palace for our designs."

Old Play.

THE Kaiserin Friedrich House stands on the Luisen platz, a quiet square just outside the rumble of Friedrich-strasse. Behind lies the maze of the Charité, a few hundred yards further on is the Augusta Hospital, close by are the Royal Clinics of Ziegelstrasse, and near at hand the Medical Jurisprudence Institution in Hannoverstrasse. Round the corner are the Veterinary College and the anatomical department, and equally close lie the various polyclinics. Trams pass the door bound for the large municipal hospitals, and the main stations for the overhead and the general railway lines are only a few minutes' walk away. A more central spot for the medical graduate it would be difficult to find in all Berlin.

A DESCRIPTION OF THE BUILDING.

The accompanying elevation and ground plans give a good idea of the building as a whole, and it is only necessary to give a brief description of the main features. On the ground floor there are four large rooms devoted to the permanent exhibition. On the left, the first and second rooms are devoted to instruments, orthopaedic apparatus, and surgical necessities. The exhibits are in glass cases, legibly labelled and numbered, and on each cabinet lies the catalogue of the firm and such literature as exists on the exhibits. Here are models of every instrument practically of every German firm, and the visitor can spend a morning in instructive and enjoyable inspection. On the right are three correspondingly large rooms. The first is devoted to electro, mechanical, x-ray, and light apparatus; the other two to exhibits representing various chemical firms. Here are exposed all the latest therapeutical novelties, those varied new synthetic preparations which German chemists delight to pour upon the public. It would take up far too much space to go into detail, and it would be invidious to single out any special cabinet for particular mention. Suffice it to say that here, as well as in the other rooms, the interests of the general practitioner are mainly kept in view. The permanent representative of the various firms, Herr August Matz, has his bureau in this part of the building, and is ever ready, willing, and able to explain the exhibits to professional visitors, to supply them with trial samples and with literature. Behind these rooms lies a large courtyard, and on the other side are the packing rooms for the use of the packers who have to look after the parcels for the loan collections.

Returning to the front hall, the visitor ascends the broad flight of granite stairs and has an opportunity of admiring the simple yet effective entrance hall. On the first landing (Fig. II.) are the cloak-room, closets, and another large packing-room. On the first floor (Fig. III.), the ground plan of which is similar to that of the ground floor, there are on the left two large rooms again devoted to the permanent exhibition. In the one is gathered a large collection of optical instruments, microscopes, cameras, plates, etc. In the second is an even more interesting exhibition showing the merits of the various bathing and health resorts, the various "baths" and mineral springs. There are albums of views, plaster models, geological charts, analytical tables, pamphlets, details—everything the practitioner can wish to guide him in making a choice as to the suitability of this or that "kurort" for his patient. On the right is a large reading-room, well

supplied with papers (unfortunately no English professional journal exchanges as yet with the institution, and in the permanent exhibition also one misses English firms, though some other foreign firms are represented). It is intended to establish in this reading-room a model general practitioner's library, containing copies of every book of interest to the practising physician, exclusive entirely of students' text-books. A beginning has already been made, and it is satisfactory to note that the large publishing firms are interesting themselves in the matter. The educative value of such a model library would be as great as that of the permanent exhibition. Behind the reading-room is the directors' room. From the reading-room one enters the main bureau, where cards for admission to the courses are given out and where the practitioner can obtain all the information he desires. The other bureau rooms, secretary's office, office of the official journal, and clerks' rooms are here.

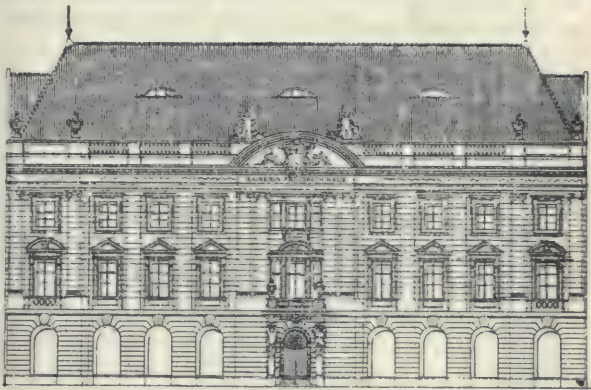


FIG 1.—FRONT ELEVATION.

THE LECTURE ROOM.

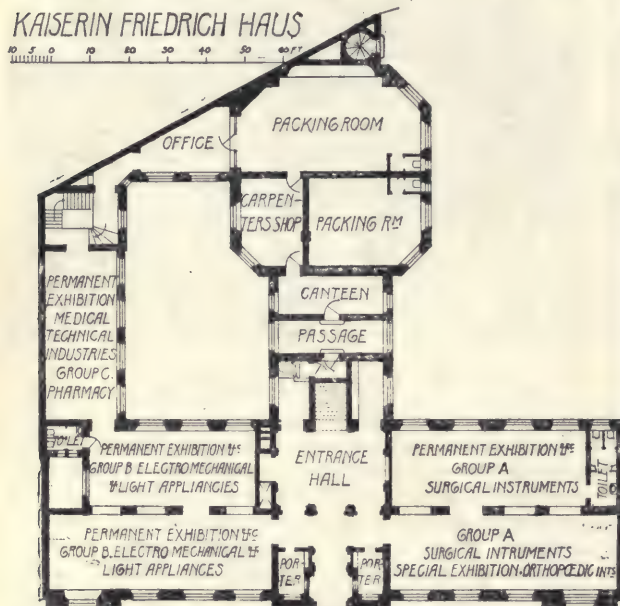
Returning to the staircase one enters the large lecture-room or Hörsaal. This is a magnificent room, accommodating close upon 240 persons, excellently lighted and ventilated, and furnished with the best of modern contrivances. Thus the seats are of the well-known American "side table" model, the arm-rest serving as writing-desks, which can be raised or lowered at will. All the furnishing is of oak, and the seats are comfortable and broad. By pressing a button the lecturer can at will darken the whole room by means of electrically moved screens, which descend over the windows. Artificial lighting is provided for by a large number of centrally and side placed electric lamps. When all are lit the room is brilliantly lighted. On the lecture stage is a large plaster screen, over which a blackboard can be lowered for demonstration purposes. An up-to-date epidiascope, by means of which it is possible to throw on to the screen an enlargement of any ordinary picture or photograph, is here, the gift of the original makers, Carl Zeiss, Jena. This room is in constant use for courses, lectures, demonstrations, etc., and its acoustic properties are excellent, making it one of the finest lecture-rooms we have yet seen.

THE LOAN COLLECTION.

On the third floor are the rooms for the State collection of specimens for demonstration purposes, which are loaned out to lecturers for demonstrations. The

collection of wax models is one of the best in Europe and is daily being added to, the institution possessing its own modeller. Here is gathered together everything that one can desire for demonstration purposes, and space alone forbids us detailing the various excellent arrangements which clamour for the visitors' undivided attention at every step. The excellent collection illustrating the history of medicine, of which the nucleus was collected by Professor Hollander, is here, and the visitor can spend a day in viewing it. The collection of old Roman surgical implements, the armamentarium of the early German military surgeons, and the interesting collection of old prints and drawings, caricatures, and engravings of medical interest are particularly worth noticing. Of these we hope to give a fuller account in another article. Suffice it here to say that the institution is endeavouring to secure a complete collection of such interesting specimens, and to take photographs and make lantern-slides of all these exhibits for the benefit of lecturers who wish to demonstrate on medical history. A fairly complete catalogue has already been printed, and several lots of diapositives are available for loan purposes. Equally interesting, and of perhaps greater educative and practical value, is the collection of exhibits illustrating the nursing of the sick.

KAISERIN FRIEDRICH HAUS



GROUND FLOOR PLAN.

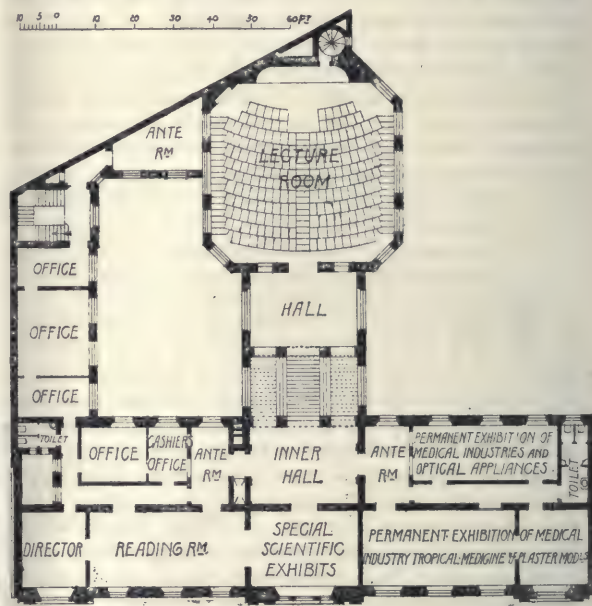
In this there are models of bedsteads and bedding, night lights, arrangements for saving labour in wards, for sick-room cookery, for general nursing and for ambulance work. These models, like all the rest of the exhibits in the State collection, are also available for loan purposes and are frequently used for demonstrations at branch centres.

THE LABORATORIES.

On the top floor are the working rooms, in which practical courses are held, and here one is at once struck with the thoroughness with which every detail has been considered, and with the excellent results that have been obtained. The lavatory accommodation is thoroughly satisfactory and efficient, and easy access is obtained to the rooms by means of the automatic electric lift with which the building is provided. There are two large laboratories, in each of which courses are held daily at times to suit the members, who are all general practitioners engaged in practice in Berlin or its suburbs. The first laboratory is used for

pathological and microscopical work, and is arranged for a membership of twenty in each course. Each member of the course has his own bench, with revolving seat, drawers, and slide cabinet.

The lamps used are not the ordinary electric light which is particularly trying to the eyes, but a special model, designed by Dr. Lowin, and specially made for the institution. In this model gas mantles are used, and the light given is steady, clear, and very well suited for microscopical work. Here, too, is a projection apparatus for demonstration purposes, and an arrangement for automatically darkening the room, similar to that which exists in the large Hörsaal. As an illustration of the thoroughness with which the institution adheres to its ideal to make the courses free to practitioners, it may be mentioned that every member is supplied free of charge with a complete microscopic outfit, Zeiss instrument, with two ordinary and an oil immersion objective, slides, staining reagents, and all necessary addenda. These outfits, of course, belong to the institute, and are returned when the course is completed. In the adjoining laboratory for bacteriological work, the arrangements are equally thorough. One need only mention the fact that no taps are provided on the benches (to obviate the injudicious washing of slides



FIRST FLOOR PLAN

and the escape of culture media into the general drains). Here is found a specially-constructed electrical centrifuge with glycerine speed indicator. Attached are the demonstrator's private room; then come a washing room, an incubation room, a room for special experimental work, the workshop of the waxwork modeller, and the lavatories. On the other side is a large Röntgen-ray room, replete with all the latest apparatus, and with a small developing and dark room attached. Courses are given here, and are very popular. The outfit is one of the best in Berlin, and the photographs obtained, both by the direct and by the "relief" methods are excellent. Behind this is a large, airy, well-lighted photographic studio, with apparatus for taking cinematographic films. Attached to it is a copying room, and a dark room with an automatic lighting arrangement by means of which the operator can obtain red, yellow, green, violet, or white light at will. A large amount of work is done here,

especially in cinematographic photography, for the value of the cinematograph for demonstration purposes is fully recognised by the Central Committee, and both films and instruments are frequently loaned to branch centres. As an example of the value of such demonstrations, the recent films showing the gait in various forms of spastic paralysis may be mentioned.

This rapid outline of the Kaiserin Friedrich Haus will suffice to give the reader a general idea of the institution. What it cannot give is the impression which a personal inspection of the whole makes on the visitor. There is nothing cheap or shoddy, for it is recognised that in such things true economy lies in purchasing the best apparatus

and the most durable materials. From an architectural point of view the building is almost ideal; from the demonstrator's and student's point of view it is really ideal. It is a pleasure to work in these laboratories, as it is an enjoyment to spend a morning in the exhibition rooms. Anyone, in fact, who desires a practical illustration of the ideal graduate place of study, should visit this institution and spend a day in becoming acquainted with the system on which it is worked and the practical usefulness of its methods. He will find no more courteous cicerone than the director, and will return from his visit, as we returned, with a feeling that here at least is something which is worth imitating on this side of the Channel.

NEWS AND COMING EVENTS.

UNDER the presidency of the United States Ambassador, Professor Osler will deliver the inaugural address of the winter session of the London School of Tropical Medicine on Tuesday, October 26.

THE office of the Secretary-General of the International Congress in Buda Pest has been removed to viii Muzeum-Korüt, 6-8, Buda Pest, where all communications relative to the Congress should be addressed.

DR. W. BEVAN LEWIS, Medical Superintendent and Director of the West Riding Asylum, Professor of Mental Diseases in Leeds University, has been elected President of the Medico-Psychological Association of Great Britain and Ireland.

ACCORDING to the *Times* the Local Government Board is in sympathy with the views which have been strongly expressed, and which were recently set forth in a petition to the Croydon County Council, against the scheme for the demolition of the Whitgift Hospital for the purpose of the North-end widening scheme.

THE death is announced of Dr. Theodore Davis, M.D., F.R.C.S., of Walton-in-Gordano, Clevedon, Somerset. Dr. Davis, who was a student of Queen's College, Birmingham, and St. Bartholomew's Hospital, was seventy-five years of age, and retired from practice some years ago.

DR. BREINL, of the Liverpool School of Tropical Medicine, formerly assistant to Professor Chiara, Prague, has been nominated to the directorship of the newly-founded School of Tropical Medicine in Western Australia. Dr. Breinl joined the Liverpool School of Tropical Medicine in 1904, and was appointed shortly afterwards to proceed to Manaos on the School's Yellow Fever Expedition.

It has been decided to proceed with the building of an extension to the Acton Cottage Hospital. The designs provide for a new children's ward, new operating room, new out-patients' ward, and committee room, and a new wing for accommodating the nurses. Mr. Alfred and Mr. Leopold Rothschild have given £400 towards the cost of the scheme, and £100 has been given anonymously.

DR. H. D. ROLLESTON is Orator for the day at the inauguration of the new Session of St. George's Hospital Medical School, on October 1, 1909, at 3 o'clock, and will take for his subject: "St. George's and the Progress of Physic." The Oration will be followed by the annual meeting of the St. George's Club. The annual dinner will be held at the Prince's Restaurant in the evening, at 6.30 for 7 p.m. A. Marmaduke Sheild, Esq., F.R.C.S., Consulting Surgeon to the Hospital, in the chair. Tickets may be obtained from the Honorary Secretaries, Medical School Dinner, St. George's Hospital, S.W.

THE number of deaths from pulmonary tuberculosis which occurred in Paris last year was 10,263. These figures are the same as for 1907, and as the population has slightly increased it may be concluded that consumption is decreasing in Paris.

THE Duke of Devonshire will preside at the 21st annual Poor-law Conference for the counties of Derby, Leicester, Lincoln, Nottingham, and Rutland, at the Town Hall, Buxton, on October 21 and 22. Papers will be read on the Report of the Royal Commission on the Poor Laws in relation to rural unions, the proposed abolition of boards of guardians, and district nursing of the aged and destitute.

AN appeal, signed by Mr. G. Marchetti, has been circulated among the Greek colony in London for funds in aid of the sufferers from the recent earthquake in Greece, by which two villages were entirely destroyed and hundreds of families rendered homeless. It is stated that the donations of persons not of Greek nationality will be welcomed. Cheques should be made to the order of, and forwarded to, Mr. George Marchetti, 57 Palmerston House, E.C. Contributions have already been received to the amount of over £600, including £40 from the Greek Minister.

It is reported that the greater part of the fortune of the late Mr. N. M. Wadia, C.I.E., of Bombay, which is stated to amount in the whole to £1,166,666, is to be administered by a trust for the relief of distress caused by fire and flood, earthquake and famine in any part of the world. Provision is also made for the establishment of hospitals, assisting medical institutions, defraying the expenses of marriages of poor girls of any nationality, providing for and educating orphans, assisting the destitute, and preserving animals useful to mankind.

PROFESSOR OSLER, F.R.S., last week gave two lectures to the University Extension students assembled at Oxford, the first of which was on "The Beginnings of Modern Medicine." After showing the debt of medicine to Ancient Greece, he traced its growth through the Renaissance to the time when Harvey's little book, "De Motu Cordis," marked the final break of the modern spirit with the old traditions. The subject of the second lecture was "Michael Servetus." Professor Osler said he had not a shadow of doubt as to the full realisation by Servetus of the function of respiration on the blood. There had been an attempt made to deprive Servetus of the credit of the description, but it was a great deal better than those of others who claimed to be the first discoverers of the lesser circulation. The discovery of Servetus was his merit as a physiologist and it was one of the highest importance.

THE fifth report of the Royal Patriotic Fund Corporation to the King for 1908 was published this week as a Blue Book [Cd. 4806].

MR. WALTER MALDEN, M.A., M.D., Cantab., M.R.C.S., St. Bartholomew's Hospital, has been admitted a member of the Royal College of Physicians.

DR. DOUGLAS ARGYLL ROBERTSON, of Mon Plaisir, St. Aubins, Jersey, Hon. Surgeon Oculist to his Majesty the King in Scotland, consulting ophthalmic surgeon Edinburgh Royal Infirmary, left estate valued at £30,002. Dr. Rayner Winterbotham Batten, M.D., J.P., of 1 Brunswick Square, Gloucester, Senior Physician of Gloucester, a member of the Council of the British Medical Association, left estate valued at £46,973 gross, with net personality £46,045.

ACCORDING to the *New York Medical Record*, the physical examinations for marriage licences, as required by the new law in the State of Washington, is receiving the hearty support of the medical profession of that State. Their belief in the benefits to be derived from such a law, properly enforced, is shown by the resolution recently passed by the members of the Spokane County Medical Society agreeing to accept no fees for such examinations.

THE annual report of the Registrar-General for Ireland, which has just been issued, states that during last year the population increased by 25,148, but against this increase there was a loss of 23,295 persons by emigration. The emigration was, however, more than 15,000 below the average for the past ten years. The total estimated population is now 4,371,455. The death-rate for the year was 17.6 per 1,000 or 0.1 below that for 1907 and 0.2 below the average rate for the preceding ten years. The highest death-rate was in the county borough of Dublin—24.0 per 1,000—whilst the lowest was in county Mayo—13.4 per 1,000.

WE regret to announce the death of Professor Alphons von Rosthorn, the well-known chief of the Second Gynaecological Clinic of Vienna. Professor von Rosthorn had been ailing for some months, and was suffering from a cardiac affection, but his death last week came unexpectedly while he was absent on his annual holiday at his estate in Styria. As a gynaecologist he was universally esteemed, and during his successive terms of office as chief of the clinics at Prague, Heidelberg, and finally at Vienna he gained the respect and admiration of the many English and American graduates who flocked to work under him. All who came into contact with him carried away the pleasantest of recollections of the chief, whose death, at a comparatively early age and while in the prime of his career, comes as a personal loss to everyone who has had the privilege of working under him. Professor von Rosthorn was a fine diagnostician and operator, and contributed largely to the literature of his speciality. He was also interested in hospital construction, and much of the excellence of the new Gynaecological Clinic at Vienna is due to the personal supervision that he exercised over the plans and to the improvements he suggested.

CHARITABLE BEQUEST.

MISS MARY ANN HUTCHINSON, of Avenue Parade, Accrington, who died on June 28, left estate valued at £30,562 gross, with net personality £29,967. The testatrix left £100 each to the Wesleyan Missionary Society, the Victoria Cottage Hospital, and the Union Street, Accrington, Chapel Fund.

MELBOURNE NOTES.

(FROM A CORRESPONDENT.)

An impression is gaining ground that our lunacy administration is not all that it should be, at least our percentage of recoveries appears to be the lowest but one of all the States. Dr. Jones, Inspector-General of the Insane, accounts for this "appearance" by the large number of discharges from the Receiving House—opened about three years ago—that would formerly have been discharged from the Asylums, and also by our use of the "trial leave," the patients on "trial leave" being recorded as "relieved" rather than as "recovered." Whatever the reason of the fall of recoveries from 44.97 per cent. in 1902 to 30.08 per cent. in 1907, the uneasy public mind is demanding investigation. Dr. Norris, too, lately chairman of the Board of Public Health, has been making a stir about mental cases in private hospitals not licensed for the insane, and where the conditions necessary for mental recovery are absent. Further investigation and legislation are promised.

By the Constitution of the Commonwealth of Australia quarantine was made a Federal Department, but only now has Parliament assumed control, and the Federal Quarantine Act came into operation on July 1. With Eastern ports within a few days' sail, and smallpox and bubonic plague for ever threatening our 5,000 miles of coast, quarantine—human, animal, and vegetable—is a matter of deadly earnest to Australia. Hitherto it has been left to each State to conduct its own quarantine, which has been woefully lax in all. The Department is yet to be created practically, and the Director will be busy for a long time in framing regulations especially for the safeguarding of the three "gates"—Freemantle, Port Darwin, and Thursday Island. Dr. W. P. Norris, the Director of the new Federal Department, was for nearly five years medical inspector and chairman of the Board of Public Health, in succession to the late regretted Dr. D. Astley Greswell, under whom Dr. Norris was senior assistant medical inspector. The present senior assistant is Dr. Robertson, a native-born Victorian, who solely by his own energy and determination has passed through the Universities of Melbourne, Edinburgh, and Cambridge, securing the diploma of public health at the last-named, and the Fellowship of the Royal College of Surgeons. He was appointed second assistant medical inspector in 1901, and first in 1904. Now he is likely to succeed Dr. Norris.

Our Government certainly looks well after its citizens in their material welfare at least. At a sacrifice of revenue it prohibited the importation of opium; pure food and unwatered milk is its constant care. Within the last month it has undertaken to provide its primary school children with "physical culture," and has commenced a campaign for the eradication of consumption, one feature of which is the denial of hotel accommodation to persons suffering from phthisis. Fear of this disease is widespread. The Home for Consumptives at Echuca, a small town on the Murray, had to be abolished several years ago in deference to the long-continued protests of the townspeople. Now a newspaper discussion has been started by a few lay and medical men under the heading "National Defence against Disease," the idea being to nationalise medicine, so that the army of medical men and women as civil servants, paid by the State, would be free not only to heal, but without fear to teach the laws of health, the right way of living, and give equal medical attention to all. It would appear that the majority already do these things without "nationalising." The subject has not yet passed beyond the sphere of newspaper discussion.

NURSING ADMINISTRATION.

THE ADMINISTRATIVE SIDE OF SANATORIUM WORK.

IV.—THE WORKING STAFF.

It is always a difficult matter to use miscellaneous labour to good advantage. The attempts of charitable and municipal societies to make work even for men in the prime of life and health have usually been lamentable failures from the financial point of view. When the labour available is that of consumptives, forced to work under special conditions, and to lead an invalid life during the process, the difficulties are increased tenfold. There is no doubt that the influence of a practical and zealous matron is one of the principal factors in making working colonies a success. The first essential to contentment is the home-like feeling which a woman can impart without thinking about it, and when this is once established the patients are eager to remain, put their best work into their allotted duties, and keep the machine oiled with a good will.

The staff needed to organise the male patients' work can be mainly recruited from among the patients themselves. A foreman, who shall be responsible to the matron or superintendent for the hours during which each patient is employed, is the most important official. If he has himself gone through the stages of recovery in this or some other sanatorium, he will be better suited to overlook similar labours on the part of the patients. He will be instructed to keep his eyes open for any signs of flagging among new recruits, and will be able to judge what demands are being made on the strength. Moreover, and this is an important factor in the situation, he will be far cheaper than outside helpers. A suitable foreman ought to be secured for about 5s. a week, with the proviso that he resides in the colony, gets full board, and is admitted to the advantages of "living the life."

Out of doors there must be a head gardener and probably a boy under him. Plenty of labour will be available among the patients for keeping the place in spick-span order; but unless the gardener is well trained, much of the genuine enthusiasm which townsmen always exhibit in the culture of flowers and vegetables will run to waste. We fear that in this department false economy often plays a detrimental part, and that the colony, with merely a working man as gardener, gets in consequence little profit out of the opportunities offered by extensive grounds and superabundant labour. The ordinary gardener is in truth seldom fitted for the supervision of an estate. There should be an efficient foreman gardener living in a cottage or lodge attached to the colony, and experienced in the art of developing all the possibilities offered by the available space. When it is remembered that a labouring gardener gets £52 a year for the very moderate services he renders, it will be seen that it would be enormously to the advantage of the colony to pay £80 or £90 with house and get a superior man. It is extremely improbable that the chances of institution life would bring the right kind of patient to undertake this department, on which

much of the onus of making the establishment pay will rest.

It may often happen that more labour is available than can profitably be employed in workshops and garden, and the addition of a small farm for supplying produce to the inmates can in favourable localities be made to pay its way fairly well. Dairy farming is unsuitable for obvious reasons, but these reasons do not hold good with poultry keeping, and a well-conducted poultry farm on modern lines should prove an attractive and paying concern. Very little capital is required to start such an industry in a colony able to supply the labour for building fowl-houses and laying out runs. It is capable of gradual expansion, as occasion offers, and can absorb, under competent superintendence, a large amount of unskilled labour.

As the colony progresses, a variety of old patients will be added to the staff, it being considered part of the functions of the sanatorium to provide work and a home for such men as can hardly live under ordinary conditions, and are likely to be useful. For about 5s. a week and often for less, the services of good carpenters, painters, and other artisans can be secured for the colony. In addition to wages, such working patients ought not to cost more than from 8s. to 10s. a head for board, washing, and minor expenses, without reckoning establishment charges.

The employment of female patients to profitable purpose presents more difficulties. At Frimley, the women help in the garden, the laundry and the outdoor work generally, but in small establishments it is often found that those whose circumstances admit of their leaving their own homes for a long course of treatment are not such as are accustomed to hard manual labour, and they do not take very kindly to it. To confine them to such sedentary occupations as lace-making, is a doubtful benefit since half the battle is restoration to active habits of life. A judicious blend of needlework and spells of labour in the garden and farm is perhaps the best solution of the difficulty so far arrived at.

It is true of this as of all institution work that one of the chief secrets of economy lies with the housekeeping. It is less necessary than in hospitals to separate the board of inmates from that of the staff in the reckoning, for in truth right through the household the inmates are being trained to perform the duties of the staff, and their diet knows little distinction. The cost of boarding the household, including patients, at Frimley, is 6s. 6½d. a head a week, and this may well be taken as a model, both as regards cost and quality. In conclusion it must be always kept in view that to run a sanatorium at the minimum cost it is essential that the permanent staff be kept small in numbers, and that every member of it be highly trained for the work, and well paid. This is the only road to economy.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, AUGUST 23 to 28.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

August 23 and 26, Surgical Registrar, Demonstration.

August 27, Medical Registrar, Demonstration.

At 12 noon.

August 23, Dr. Bernstein, Pathological Demonstration.

At 12.15 p.m.

August 24, Dr. Pritchard, Practical Medicine.

August 25, Dr. Grainger Stewart, Practical Medicine.

At 5 p.m.

August 24, Dr. Grainger Stewart, Syphilitic Diseases of Nervous System.

August 25, Mr. Bishop Harman, Squint.

EDITOR'S LETTER-BOX.

ANTI-VACCINATIONISTS AND MODIFIED SMALLPOX.

To the Editor of THE HOSPITAL.

SIR,—Adverting to the article in your issue of July 31, headed "Anti-vaccinationists and Modified Smallpox," I should be glad if you would state in your columns:

1. Where in the *Vaccination Inquirer* has serum or vaccine therapy been described as "filthy iniquity," "loathsome art," or "unclean fraud."

2. Also where is it asserted that vaccination is upheld by the medical profession solely because it affords fees.

3. When you say that "bacteria are no more and no less unclean than the yeast with which bread is made," do you mean this remark to apply to the living bacteria of specific diseases?

4. If vaccination is the "intentional transmission of disease," how can it be honestly compared with soup, bread, and beef-steak?

5. How can the adult population of Leicester be "the least efficiently vaccinated part of the population" in view of the fact that practically the whole of the child population is unvaccinated?

6. If vaccination has hitherto been practised only as a "system of empiricism," don't you think that even language of the anti-vaccinationist is inadequate to denounce its legal enforcement?

Yours faithfully,

JOSEPH P. SWAN.

11 Scarisbrick Street, Southport, August 5, 1909.

[Mr. Swan's questions can be very briefly answered.

(1) The quotations are from the copy of the *Vaccination Inquirer* forwarded by Mr. Swan to the offices of THE HOSPITAL. (2) The same applies to this question. (3) The bacterium of a specific disease, whether alive or dead, is strictly comparable with any other unicellular organism, such as yeast. Neither is in the least "unclean" in any sense of that term which we can admit; the lesions produced in a susceptible animal by the invasion of micro-organisms are, of course, to be distinguished from the organisms themselves. (4) Vaccination was not compared with soup, bread, or beef-steak; there is no comparison possible between concrete substances like these and the act of vaccination. The comparison made was between culture media and soup, and between serum and beef-steak; and these comparisons are strictly accurate. (5) The answer to this question is contained in the paragraphs which Mr. Swan marked for us in his paper. Since ten or twelve years is, on the average, the

period during which vaccination protects against smallpox, then an adult population, many of whom have never been vaccinated, and very few of whom have been re-vaccinated, may reasonably be described as less efficiently vaccinated than a child population a certain proportion of whom are adequately protected by vaccination. (6) Does Mr. Swan fully realise the meaning of the word empiricism? Until the last generation practically all medicine and surgery has been empirical, and much of it is so still. A remedy or a system which has been empirically tested and found useful is not a thing to abandon until something better is procured. No one proposes to abandon the quinine treatment of malaria, which is empiricism pure and simple if anything ever has been, until some better therapeutic measure is brought forward; some day, possibly, a cure for this disease based on the biology of the specific plasmodium may be introduced, but even then it will have to be empirically tested before it can be adopted. We cannot understand, much less sympathise with, the attitude of mind which denounces the enforcement of a measure found to be empirically useful, and we do not admit for a moment that there is anything in the least ignoble about empiricism. —EDITOR, THE HOSPITAL.]

APPOINTMENTS.

DR. T. S. HIGGINS has been appointed assistant medical officer of health for Birmingham.

DR. W. O. ARNOLD has been appointed Deputy Medical Officer of Health to the Gateshead Corporation.

DR. DUDLEY BUXTON has been appointed Lecturer in Anaesthetics at the Royal Dental Hospital, London.

DR. E. H. S. NASH, of Derby, has been appointed Medical Officer of Health and School Medical Officer of Wimbeldon.

DR. SINCLAIR, of Middlesbrough, has been appointed School Medical Officer to the Gloucester Education Committee.

DR. WILLIAM SAVAGE has been appointed Medical Officer of Health and Chief Medical Inspector of Schools for the County of Somerset.

DR. RAINES (assistant medical officer of health for Hull) has been appointed deputy-medical officer to the Hull and Goole Port Sanitary Authority.

DR. PATRICK T. MCARDLE, Assistant Master to the National Maternity Hospital, Holles Street, Dublin, has been appointed Gynaecologist to the hospital.

DR. J. R. LAMBERT has been appointed medical officer of the newly-formed medical relief district of Farsley, in the North Bierley Union; and Dr. Norman Hughes has been elected medical officer of the newly-formed relief district of Calverley in the same Union.

MR. SYDNEY SCOTT, M.S., F.R.C.S., has been appointed Surgeon for Diseases of the Throat and Ear at the National Hospital for the Paralysed and Epileptic, Queen Square. Mr. Scott holds the position of Chief Assistant in the Aural Department at St. Bartholomew's Hospital, and is Aural Surgeon to the Evelina Hospital for Children.

THE HOSPITAL

AUGUST 21, 1909.

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Address

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The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

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SATURDAY, AUGUST 28, 1909.

THE MARTYROLOGY OF MEDICINE.

LONG ago, when medicine was a mystery even to the adept, Tertullian crystallised a truth into an epigram when he stated that "the blood of the martyrs is the seed of the faith." Wise and thinking men, like the Emperors Julian and Akbar and the Chancellor Gerson, have recognised the importance of that truth in matters of religion, and generally in matters of philosophy, art, or science, the great leaders have been at one with them in admitting the futility of persecution as an argument of persuasion. Nevertheless there have been times in the history of art, philosophy, and science, no less than in the history of religion, when the dogmatist triumphed over the patient believer and when to persecute was deemed better than to investigate. The story of such occasions must ever be a sad and dismal one to read. We are tolerant to-day, and toleration, it is satisfactory to note, is getting a more powerful factor in the ethics of civilisation as men get more enlightened. And yet there are tales of martyrdom which are not as old as the Koran, and of persecution much nearer our own day than the times of Calvin and Torquemada. To those of us who are under the impression that scientists are more broad-minded, more liberal, less intolerant than philosophers, artists, or theologians, a glimpse into the martyrology of medicine will prove elucidative, though at the same time painful and intensely shocking to the supreme self-satisfaction that many of us feel in thanking Providence that we are not as other men are.

Sir William Sinclair has therefore done well to put before English readers a clear study of the life and history of one of the most interesting medical martyrs of modern times.* The martyrdom of Semmelweis was not indeed one that can compare in physical severity with that of Servetus or Damian, but it was none the less a martyrdom. Had men like Klein, Braun, and Scanzoni possessed the power or the means to lead the patient young Hungarian investigator to the scaffold, we may be assured that the discoverer and elucidator of the aetiology of puerperal fever would never have gained his professorship at Pest. Fortunately scientists

have never held the power that was accorded to theologians, and Semmelweis died a natural death—dying, as Von Waldheim remarks, a victim to pyæmia, the disease whose identity with puerperal fever he had been the first to recognise and to the prevention of which in midwifery, gynæcology, and surgery, he had devoted his energies as a teacher. But before his death, for nearly a quarter of a century, he was made to suffer for his temerity in daring to dispute the then dogmas of medicine. Nowadays the third-year student laughs with impunity at these dogmas; the heresy of to-day (to quote a Church Father once more) is the creed of to-morrow. Semmelweis's heresy has become the faith of the profession, and his detractors and persecutors, with few exceptions (and such only those who, like Virchow and Simpson, whole-heartedly confessed their errors and became supporters of the new theory) live, with the critics of Keats, each but as a

Noteless blot on a remembered name.

Medicine has ultimately acknowledged the just claims of the pioneer, but the long, heartbreaking struggle which rewarded the brilliant inspiration and the patient research was a veritable Progress towards Calvary for Semmelweis. It was a martyrdom, and, as has been so often pointed out, one of the most indefensible of all in the martyrology of medicine. Here and there a few bright points flicker in its sombreness. For instance, from the wearying attacks of his German colleagues, it is refreshing to turn to the recital of one Englishman's support. The late Dr. Routh, who introduced the new theory to the notice of the London obstetricians, remained an enthusiastic convert, and loyally aided the spread of the new doctrines in this country. Much less gratifying to English readers is the story of the resistance of illogical dogmatists of the type of Denman, whose antagonism considerably retarded the work of progress.

There is a lesson in all this for every professional man to-day. It is the lesson of that supreme tolerance which some of us are inclined to admit in principle and flout in practice. In medicine, as in all other professions, there is a tendency towards trade unionism, but there is a further tendency, which it shares solely with theological sects—namely, to

* "Semmelweis: His Life and His Doctrine." By Sir Wm. Sinclair, M.D. Manchester University Series.

insist increasingly on the weight of authority and dogma. Thinking men will readily agree that such tendencies are not in the best interests either of the profession as a whole or of medicine as a science. Our highest aim is to investigate truth, not to buttress theories by the weight of unassailable

authority, and it would be a sad time for medicine when it is decreed that an associational meeting is as infallible as an ecumenical council. The martyrology of our profession is large enough already; there is no room for further indiscretions in the exercise of the privilege of expert criticism.

SANITARY MATTERS IN THE WEST AFRICAN COLONIES.

PROFESSOR SIMPSON, after visiting the Gold Coast to investigate the recent outbreak of plague there, studied the sanitary conditions prevailing in some of the other West African colonies. His results are embodied in a report which is full of information and instruction. He found the towns in West Africa terribly behind the times in matters relating to sanitation, because at present the West African Medical Staff is not equipped for dealing with practical sanitation, and no one appears to be responsible for the public health. From time to time individual medical men and the Government attempt to improve matters, but owing to the fact that few officers are permanently appointed to one station there is no definite continuity in any policy. Further, most of the men have their ordinary work to perform, and it is only in their off times that they can take an interest in destroying mosquitoes, looking at drains, the construction of houses and so on. Nowadays it is realised that no great advance in public health can be made without a special health department, and the remedy for the unhealthy condition of the West Coast towns is to be found, as Professor Simpson suggests, in the creation of a special Health Organisation.

"It is impossible," he remarks, "to effect permanent and important improvements, and when effected to maintain them, without an organisation whose duty is to initiate and advise the Government as to improvements, and when these have been sanctioned, to see that they are properly carried out. Without an organisation no proper inspection of out-stations and native towns can be systematically carried out; recommendations have not the weight they would otherwise possess, and money is wasted, full value being seldom obtained for the expenditure. Owing to absence of a special sanitary administration drains are constructed that are useless; houses are built that are unhealthy; towns are allowed to grow up from villages without any forethought as to development and growth, the result being often a most insanitary condition that nothing but costly demolition will remedy or remove. Places become or continue to be malarious, because there is no organisation or controlling agent to prevent it. Moreover, an organisation such as this will be able to deal with important problems. Apart from the prevalence of malaria and tuberculosis, other diseases such as

yellow fever, sleeping sickness, smallpox, cerebro-spinal disease, and plague, have to be carefully watched, and measures taken to prevent their spread both by land and sea. Besides this inter-provincial and inter-colonial risk of infection there are risks arising from the increasing trade of West Africa with European ports. Cholera is a disease from which West Africa has hitherto been free, and owing to the bad water supply in the country generally it is of the highest importance that every precaution shall be taken to prevent the introduction of a disease which would be more destructive than plague."

Professor Simpson proposes that there shall be a special health department in each colony, small in its constituent numbers, whose members should be specially trained, and whose whole time should be devoted to public health duties. This department should be a branch of the West African Medical Staff separate in its functions and not transferable to other medical duties, and under a Sanitary Commissioner. It would be advisable, in order to prevent friction from a dual system of control, for the Sanitary Commissioner to be subordinate to the principal medical officer as President of the Central Board of Health, but yet in sanitary matters to be recognised as the expert, and as the responsible officer. The executive control of the health organisation should be completely under the Sanitary Commissioner. No medical officer of the West African Medical Staff should be eligible to enter the special health branch or department until he has been four or five years in the colony as an ordinary medical officer, and no officer should hold a public health appointment unless he holds or takes within a certain time of his appointment a diploma in public health and a diploma in tropical medicine and hygiene. When once in the department, promotion should be in that branch up to the Sanitary Commissioner, and not in the medical branch leading to the principal medical officership.

This, briefly, is the scheme, which seems well worthy of consideration. An obstacle in its way will probably be the question of funds to finance it. It is manifest, however, that ultimate improvement in all these West African towns will lower the death rate and so save the Government money in the long run on the lives of their employes; ultimately some such scheme must find a place in the future development of West Africa.

ANNOTATIONS.

Physical Exercises in Schools.

DURING the past week the Board of Education has published a revised syllabus of physical exercises for the use of local educational authorities and teachers of elementary schools. This is an interesting memorandum, and a hopeful sign of the fact that the powers that be are amenable to suggestions from outside, even in a sphere where hitherto outside advice has been received with some scorn and much opposition. Reformers in education have always had a struggle in making their efforts for the improvement of existing measures felt, and none have had a harder battle to fight than those who insisted that in modern times more attention is being paid to the mind than to the body, and that sanity in intellect is to be greatly helped and encouraged by sanity of body. The present memorandum must make pleasant reading for these supporters of physical education. The Board of Education not only comes briskly into line with them, but it gives the full weight of its official authority to the suggestions that have been made and which must have the cordial approval of all medical men. Every school inspector, whether medical or otherwise, knows the regrettable lack of bodily stamina that is shown by 50 per cent. of pupils in elementary public schools. In private and higher-grade schools the pupils compare much more favourably with those, for example, to be found in German institutions where physical training is made as much of as purely intellectual teaching, but in elementary schools the physical standard is lamentably low. It is to be hoped that the suggestions now officially brought to the notice of teachers by the Board will be carefully considered, mastered, and given a trial by those whose care it is to watch over the younger generation. Much can be done by efficiently and solidly supporting the Board in this matter. A great deal of the physical unfitness to be seen in our schools is a result of ignorance, not of inherent disease or actual pathological change, and is therefore remediable. In rare cases only it may be the province of the medical inspector to deal with it: in general the teachers can do much to bring about a better state of affairs by paying attention, in the way suggested in the recently issued memorandum, to the physical culture of the pupils under their charge. To professional readers the importance of such physical training need not be pointed out, but to the laity it is a matter that cannot be too often and too authoritatively discussed.

Forty Years of Hospital Work.

DURING the past forty years much progress and many improvements have been made in hospitals and hospital work all over the world. In England the changes that have been effected during these decades are striking in the extreme, and it would be both interesting and instructive for anyone conversant with the conditions of institutional life forty years ago to give his impressions of English hos-

pitals as he finds them to-day. It is over forty years since Sir Henry Burdett made his first inspection of hospitals. At that time asepsis was unknown as a routine practice, the mortality after operations was from 33 to 40 per cent., that of puerperal fever scarcely much lower; there were no trained nurses, nor was there any system for training and instructing women engaged as attendants upon the sick. Neither the general hygiene nor the administration of hospitals was perfect. To-day all this has been changed. Pasteur's discoveries, Lister's application to surgery of the theories which Semmelweis had already enunciated in midwifery, greater attention to details of construction in hospital building, and to elementary essentials of hygiene, have been principally instrumental in effecting this wonderful change. Having been actively engaged in hospital work all through this time of transition, reform, and rearrangement, Sir Henry's observations on what has been accomplished will possess a special interest for the public, the profession, and all who take an interest in hospital work. He will commence a tour of inspection of the principal English hospitals this week, visiting every institution of importance and carefully contrasting and comparing it with its forerunners. We hope to publish the results of his tour in the form of special reports in the new series of *THE HOSPITAL*. The first report will appear in the first issue in October next.

Sleeping Sickness.

THE Sleeping Sickness Bureau Bulletin, No. 9, 1909, edited by Dr. Bagshawe, contains an account of some recent researches into the ætiology and treatment of sleeping sickness. Kleine has lately shown that tsetse flies, after sucking up trypanosomes from the blood of an infected animal, remain harmless for 17 days or so, but that after that period of time they are capable of transmitting infection. This briefly means that the parasites (the trypanosomes) have undergone some development, probably sexual, in the stomach of the insect, so that after the necessary time is over they or their young forms can find their way back, *via* the proboscis, into new hosts. The author (Kleine) now continues his work and studies the forms of the trypanosomes seen in the infected flies. These are very varied, and, as far as one can judge, might quite easily represent totally different species. As regards treatment of trypanosomiasis, the same lines are still in force, with a tendency to replace the older drugs by newer and less toxic ones. Atoxyl, owing to the toxic symptoms that have followed its use, is now hardly ever given; its place is taken by soamin, its English equivalent, or by arsacetin, an improved compound. Newer still is Ehrlich's arseno-phenyl-glycin, a drug from which great results are expected. This was recently tried for the first time in human therapeutics by Alb, who gave it to patients suffering from general paralysis. No toxic signs appeared, and no unusual symptoms developed, and this being so, it will probably be quickly tried in human trypanosomiasis.

MEDICAL OPINION AND MOVEMENT.

DR. E. K. MACOMBER has advocated for a decade the use of Dilating Bags for the Prevention of Perineal Lacerations during labour. His method is given as follows in the *American Journal of Obstetrics*. After the cervix has dilated to the size of a silver dollar or a little larger, and labour pains are active, the dilating bag of Champetier de Ribes, or one of its modifications, is boiled, lubricated, and introduced into the vagina; it is then slowly filled with a warm antiseptic solution and the bag left to be expelled, being held during each pain to prevent rapid expulsion, which might cause lacerations. It is claimed that by this means the vagina is gradually dilated in such a way that the second stage of labour is materially shortened: in many cases the foetal head emerges from the vulva immediately after the bag is expelled. At the same time the presence of the bag stimulates the secreting glands of the vagina, and thus keeps the passage well lubricated. Furthermore, the pains do not so frequently become inefficient during the second stage; and if they do, slight traction on the bag will immediately bring on a pain. By this method it is said that instrumental deliveries are very largely avoided, as well as the lacerations so common in spontaneous delivery. The direction of the dilating force is also towards the outlet of the vulva instead of towards the centre of the perineum. Several American obstetricians who have tried this plan report favourably on it, though one or two evidently have doubts about recommending it unless the manipulator is thoroughly *au fait* with antiseptic routine.

THE Induction of Labour at Term as a matter of routine is advocated by Dr. A. H. Wright in a paper which has been read before the Toronto Academy of Medicine. The author commences by reporting a case in which pregnancy went to five weeks beyond term, and resulted in the birth of a child of 12½ lbs. weight, which lived only half an hour, and resulted in four months' confinement to bed for the mother; and he believes that such cases of unduly prolonged gestation are not uncommon. Taking two hundred and seventy days as the normal term of pregnancy, he formulates recommendations to induce labour in all cases within two or three days after the expected date of confinement, whether there are any symptoms of approaching labour or not. To plug the vagina by the Schauta method, with especial care to pack the vault tightly. To allow the patient to get up and go about, after plugging, if she chooses. In twenty-four hours to remove the tampon and put in a fresh one; and if this does not induce labour within a further twenty-four hours, to pass a bougie into the uterus and wedge it up with a third tampon. As a matter of experience, the bougie is unnecessary in a large proportion of cases, and when this is the case it is evident that from the point of view of aseptic midwifery there is no objection at all to the procedure.

A VERY interesting study of the question of the usual mode of infection in pulmonary tuberculosis is contributed to *La Semaine Médicale* by Dr. J. Lehrmitte. For some time the view has been generally accepted, as first propounded by Koch, Baumgarten, and others, that in ordinary pulmonary tuberculosis infection takes place through the air passages. Pathological anatomy confirmed this view, and showed that in the early stages the morbid lesions were purely alveolar and resulted from the irritation and necrosing action of the tubercle bacilli at the seat of inoculation. The further extension of the disease depended upon the conditions of resistance of the organism. More recently, however, this inhalation theory has been seriously contested, and it has been sought to prove that the intestinal and lymphatic channels were the more usual routes of infection to the lungs. This hypothesis has been based upon the experimental researches of Chauveau, Von Behring, Calmette, and Guérin, by which it has been shown that the ingestion of tubercle bacilli in animals may lead to tubercular lesions of the lungs. From these facts Von Behring has developed the view that a pulmonary tuberculosis in adult life may owe its origin to an intestinal infection that has been contracted during childhood and that has remained latent for some time before setting up the pulmonary lesion.

THESE theories Dr. Lehrmitte proceeds to contest from two points of view. In the first place the author points out that the pulmonary lesions obtained in animals as a result of experimental injection of the bacilli are of a totally different type from the ordinary chronic pulmonary tuberculosis in man. They correspond to the scattered miliary type of disease, such as is found in conditions of general tuberculosis, in which the bacilli have gained access to the blood-stream. Such experimental results, therefore, in no way justify the supposition that chronic pulmonary tuberculosis can arise in this way. Dr. Lehrmitte then discusses the possible channels by which the bacilli may find their way to the pulmonary tissues. Theoretically they might be carried there either by the lymphatics or by the blood-stream, but actually the only obvious course from the intestines appears to be a mixed one—namely, the mesenteric lymphatics to the thoracic duct, and so into the blood-stream by the subclavian vein, the superior vena-cava, the right side of the heart, and the pulmonary artery. But such an infection *via* the blood-stream does not lead to chronic localised lesions in the lungs or elsewhere, but always to conditions of general tuberculosis, with scattered tubercles, such as have been found in the experiments already referred to. Moreover, pathologically intestinal or mesenteric lesions are of the rarest occurrence in ordinary pulmonary tuberculosis. Dr. Comby, reporting on 525 autopsies of children affected with tuberculosis, has not found a single case in which the primary lesion was in the intestines or mesenteric glands.

IT must be admitted, however, that concomitant affections of the glands around the upper part of the alimentary tract, the tonsils, adenoid tissue, and cervical glands do occur with pulmonary tuberculosis. From these parts also the only probable route to the lungs appears to be *via* the lymphatics into the jugular and subclavian veins, and so by the blood-stream to the lesser circulation, and the objections to a pulmonary infection of the ordinary type by this channel have already been stated. It has therefore been supposed that infection may take place entirely through the lymphatic channels; and for this purpose anastomoses have been hypothesised between the cervical, subclavian, and pleural lymphatics, or between the cervical and mediastinal lymphatics. The most careful anatomical researches of Dr. A. Most by means of injections under pressure of coloured liquids into the lymphatics have demonstrated that no such anastomoses exist, that there is no connection between the cervical, subclavian, pleural, and mediastinal lymphatics, by which bacilli or other infective material could pass from the one to the other. Similarly he has shown that there is no connection between the mesenteric, hepatic, or diaphragmatic lymphatics on the one hand, and the pleural or mediastinal lymphatics on the other. The whole theory, therefore, appears to be based upon false suppositions, and the inhalation theory of infection for ordinary chronic pulmonary tuberculosis appears to be the only one feasible.

THE coincidence of pulmonary tuberculosis with cervical adenopathies may be explained in the same way as coincidence with other tubercular lesions—for instance, in the joints. Finally, Dr. Lehrmitte discusses the causes which underlie the predilection of the disease for the apex of the lung. Most authors explain this predilection on the ground of deficient expansion of the upper part of the thoracic cavity, causing stagnation and deficient aëration. The expansion of the lungs in deep inspiration causes an increased flow of blood in the vessels, and this would be less marked at the apex, corresponding to the deficiency of expansion. In expiration, too, the contrary takes place, and, in addition to the expulsion of air by the elastic retraction of the lung, there is an expression of the lymphatic vessels. These latter form the filter into which pass the germs and dust from the respiratory epithelium. At the apex, therefore, where this expression of the vessels would be less active, the bacilli have better opportunity to accumulate, settle, and set up a tubercular lesion.

M. A. CALMETTE and C. Guérin claim to have found two practical means by which they are able to differentiate Bovine Tubercle Bacilli from the human type. In the first place the bovine bacilli have the characteristic of growing well in the presence of glycerinated ox bile, whereas the human type cannot be cultivated in this way. And again the goat is sensitive to the bovine type, and intramammary injection of the bovine bacilli leads to a definite local development of the disease as well as tuberculous deposits in other parts of the body,

while the human bacilli are more or less innocuous to the goat. In a communication on the subject to the Académie des Sciences these authors cite numerous cases in which the origin of the tubercle bacilli was confirmed by these tests; and they have proved the value of these tests by a number of experiments in which the nature of the bacilli was known. In cases in which the bacilli were from the sputum of the tuberculous patients, intramammary injection in goats either had no effect or only produced a little induration of the retromammary glands or small calcified nodules.

DR. DAHLGREN, of Upsala, draws attention to a clinical condition which has all the appearance of a Peritonitis due to perforation of a gastric ulcer, but on opening the abdomen no such lesion is found, and the peritonitis, generally localised, is caused by the propagation of infection through the wall of the stomach. He gives details of two cases of the kind which have come under his notice. The first case was that of a girl aged 20, who had suffered for some time from symptoms of gastric ulcer, and suddenly developed all the symptoms of a peritonitis, with fever and a rapid pulse. On exploration the peritoneal cavity contained serous fluid and considerable injection of the blood-vessels. There was some infiltration and thickening of the gastric wall near the pylorus, but no perforation. Gastrojejunostomy was performed, and the patient made a good recovery. The second case was that of a man aged 33, who also developed acute abdominal symptoms pointing to a local suppurative peritonitis due to perforated gastric ulcer. Operation showed a localised abscess behind the lesser omentum, with adhesions between the liver and stomach, but there was only a congested condition of the vessels of the stomach wall and no ulcer. In both cases then the primary lesion appears to have been in the gastric mucous membrane, an infective process spreading through the wall of the stomach to the peritoneum, probably *via* the lymphatic channels.

DR. A. VON LICHTENBERG has made some careful observations on the condition of the lungs and heart after Abdominal Section, and according to his report some slight affection of the lung, bronchitis or pneumonic congestion, is much more common than is usually supposed. These observations were made upon 100 patients of both sexes and all ages up to 70. The nature of the abdominal operations was varied, including those for hernia, appendicitis, gastric and biliary affections, etc., and likewise the anæsthetic—ether, chloroform, local and spinal anæsthesia all being used. The author examined the patients both before and after operation, and found that of the 100 patients after the operation 35 showed physical signs corresponding to a pneumonia, 38 developed bronchitic signs, and only 27 remained free from any change in the respiratory organs. It would appear from these observations that post-operative lung complications of a transient nature are much more common than is usually supposed, and that they are completely overlooked in a large proportion of cases. Dr. Von Lichtenberg suggests that slight elevations

of temperature during the first few days after operation are frequently due to such pulmonary affections. There was no relation between these lung affections and the kind of anæsthetic, and the author thinks that the pneumonic signs observed were embolic in origin. Observations on the blood-pressure showed that after a general anæsthetic there was a fall in the blood-pressure which lasted generally twelve or fourteen days or even longer, but after local anæsthesia there was a tendency for the blood-pressure to rise.

AN interesting contribution is made by Dr. V. Courtellemont, of Amiens, to *La Semaine Médicale* on what he terms the Quantitative Impermeability of the Kidneys as distinguished from the recognised qualitative impermeability for sodium chloride, urea, or toxins in conditions of Bright's disease. By quantitative impermeability he means the disability of the kidneys to excrete water, and he maintains that this is a characteristic of certain renal affections and is distinguished clinically by dyspnoea often assuming the nature of intense asthmatic attacks. There is, in fact, in these patients a coefficient of capacity for liquids which can be tolerated by the organism but must not be exceeded. This coefficient of capacity or of ingestion is a little more than the amount of urine excreted and is determined by the relation of the amount of liquid ingested to the urine excreted. The difference between these quantities should not exceed 200 or 300 grammes, which it may be supposed are got rid of by other channels. If this coefficient is exceeded, fluid accumulates in the organism and dyspnoea supervenes. The coefficient varies for different cases and should always be determined by reducing the liquid ingested to within about 200 grammes of the urine excreted. In certain cases it may be necessary to reduce the fluid to as little as 800 or 700 grammes. The restriction of fluid in cases of anasarca and cardiac distress is already in common practice, but apart from such conditions the administration of fluids has been considered to assist the elimination of toxic bodies in the blood. If, however, the kidneys cannot cope with the fluid presented, as the author points out, only harm ensues. But the determination of this coefficient of renal capacity for fluid lays down a rational principle for guidance in these cases. The author is of opinion that the dyspnoea is occasioned by an excitation of the pulmonary capillaries by abnormal repletion of the lesser circulation, but he also suggests that it may be an auxiliary means of getting rid of the excess of fluid by increasing the elimination of water vapour through the lungs.

A FEW years ago Roch pointed out that, in cases of Aortic Insufficiency, capillary pulsation might manifest itself in the eye by variations in size of the pupils occurring synchronously with the heart-beat. Recently Landolfi, of Naples, has studied this question, and finds that the sign is present only when the heart-lesion is one of pure aortic regurgitation, and when marked hypertrophy of the left ventricle and a pronounced Corrigan's pulse are concomitants. The patient should be examined in the upright posi-

tion, and in order to render the sign more obvious it is usually necessary to employ such artifices as making the patient run, compressing the femoral arteries or the abdominal aorta, and previously administering digitalis. These alternate contractions and dilatations of the pupil can be explained by considering the condition of the iris during systole and diastole respectively. The energetic systolic propulsion of the blood causes hyperæmia of the iris with consequent myosis. During diastole the rapid return of blood towards the heart leads to anæmia of the iris with mydriasis. The phenomenon is therefore a confirmation of the researches of Mosso, who maintained that there exists a relation between the state of the peripheral vessels and that of the pupil.

A SOMEWHAT rare complication of Typhoid Fever was reported by Widal at a recent meeting of la Société Médicale des Hôpitaux. The patient, a young man aged 20, was attacked by sudden and complete blindness on the morning of the ninth day of the disease. No history of previous ocular disturbance could be obtained. Ophthalmoscopic examination of the fundi revealed the presence of bilateral œdema of the papilla, with marked venous dilatation. Lumbar puncture was performed immediately, and an exit given to clear fluid, which appeared to be under extreme tension. No albumin or cellular elements could be discovered in the cerebro-spinal fluid. The operation was followed in two hours by marked amelioration of the ocular condition, the improvement continuing until in a few days a complete cure resulted. The fundi were then found to have returned to their normal appearance.

WE recently drew attention in an annotation to the Therapeutic Value of Oysters in cases of Tuberculosis, as well as to their use on the Continent as convenient vehicles for the administration of sea-water medicinally. Brintet, of Lyons, has just published a study of the conditions which may follow the ingestion of contaminated oysters, conditions which vary from slight gastro-enteritis to typhoid fever. He finds that as a rule the percentage of consumers of contaminated shell fish attacked is high. The incubation period is a long one, sometimes extending to as much as thirty hours after ingestion. The symptoms of intoxication vary greatly in different cases, but vomiting, colic, and diarrhoea are constantly present. When typhoid fever occurs it is of long duration, and pyrexia is usually high. In one case, that of a child of eight, a high temperature lasted for over forty days. Bacteriological examination rarely reveals the presence of the bacillus of Eberth, but in all the oysters examined the *B. coli communis* and a large number of the bacilli of putrescence were found. The author cites one interesting case in which a breast-fed child was attacked by severe gastrointestinal disturbance several hours before the mother herself experienced any discomfort, a fact which tends to show that the period of incubation is shorter in more susceptible persons, as well as that the toxin is excreted in the milk.

HOSPITAL CLINICS.

HEADACHES AND THEIR TREATMENT.

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(A Lecture delivered at the London School of Clinical Medicine.)

THERE is probably no symptom of ill-health more frequently encountered than headache. It forms part of the picture in the early stages of most of the acute organic disorders; is a frequent accompaniment of chronic disease; and is a characteristic phenomenon in many functional disturbances. Its manifestations are varied, and, in some of its more distinctive types, it constitutes the predominant feature of an illness and guides us unerringly to the correct recognition of its cause. It is uncommon in infancy and old age, and is much more frequently encountered in women than in men. It may be induced by a variety of local conditions, such as disorders of the teeth, disease in the throat, nose, ear or eye; refractive errors; rheumatic or gouty affections of the scalp, muscles or fasciæ; or it may ensue upon an inflammatory or traumatic lesion of the cranium. But most frequently of all it depends upon errors of metabolism consequent upon irregular habits of diet and exercise, or upon the occurrence of constitutional or organic lesions.

It must be apparent that a pain which owns such a multiplicity of causes demands considerable care in its investigation, and that nothing can be more illogical than the blind faith with which the public swallows this, that, or the other headache-cure boldly advertised by the unscrupulous quack as infallible.

Let us glance at the most frequent of all forms of headache—that which results from a toxæmic condition of the blood. A toxæmia may be induced either by poisons introduced from without, or by poisons created within the body. Certain drugs, such as iron, quinine, salicine, and opium; unwholesome food containing ptomaines; alcohol when taken in more than physiological amount; and tobacco excessively indulged, may be mentioned as familiar examples of substances which may, when taken into the body, cause headache. The cure of this form of headache is obvious, and consists in the withdrawal of the poisonous substance which is responsible for its production. When it happens in connection with the legitimate administration of drugs for curative purposes, the headache may often be obviated by their admixture with suitable correctives. Quinine can often be tolerated when combined with hydrobromic acid; opium when associated with belladonna or one of the aperient alkalies; and the salicylates when presented with bicarbonate of potash or aromatic spirit of ammonia. In the case of iron, it is often found that one of the milder preparations agrees perfectly when the more potent varieties of the drug are upsetting. Such useful remedies as the citrate of manganese and iron, the valerianate of iron, the salicylate of iron, the syrup of quinine, strychnine and iron, the citrate of quinine and iron, and the peptonate of iron, may be

enumerated as useful examples of this class of drug. In regard to alcohol, the subject of treatment is too large to enter upon here, but it may be mentioned, in passing, that in order to assist the patient to accomplish the total abstinence which, in cases of an established alcoholic habit, is essential, he may be helped by such a prescription as the following:—Extract of hydrastis, two grains; extract of belladonna, one-twelfth of a grain; capsicin, one-eighth of a grain; and strychnine, one-thirtieth of a grain: given in the form of a pill three times a day after meals.

Of the poisons created within the body, apart from visceral disease, those which ensue upon a faulty digestion, excessive alimentation, insufficient exercise with consequent ineffective elimination of waste products, are mainly responsible for headache and other evil consequences. This variety of headache is due primarily to interference with hepatic activity, and to fermentative or putrefactive processes in the gastro-intestinal tract. For its relief the food must be of the simplest and most bland description, and should be carefully adapted to the patient's digestive capacity. In cases where the stomach is dilated and its walls are flabby, a few morning wash-outs through a syphon-tube followed by the application of the faradic current, and twenty minutes massage to the abdominal walls, will be found useful. In patients who have to blame an overnight revel or an unwise evening meal for their headache, the speediest means of relief is afforded by an emetic. In order to stimulate hepatic activity, podophyllin, grey powder, blue-pill, calomel, iridin, or leptandrin, combined with either colocynth or rhubarb should be resorted to. For the prevention of intestinal fermentation, antiseptics are valuable and may be given in an acid or alkaline mixture, according to the indications of the case.

(a) Dilute hydrochloric acid, twenty minims; pure carbolic acid, two grains; strychnine solution, five minims; tincture of ginger, twenty minims; decoction of cinchona-bark to one ounce: to be taken three times a day one hour after meals.

(b) Sulphocarbonate of soda, ten grains; bicarbonate of soda, fifteen grains; tincture of nuxvomica, ten minims; spirits of chloroform, twenty minims; compound infusion of gentian to one ounce: to be taken three times a day, one hour before meals.

In cases which come under this category, help is also afforded by the inclusion in the daily dietary of one pint of soured milk. This is conveniently prepared at home by the use of the lactic-acid tablets, put up by Allen and Hanbury under the name of "Sauerin." The proper degree of "souring" is produced in the milk by its treatment in the Sauerin-apparatus, supplied by the same firm, which is sent out with complete directions.

Headache accompanies all acute fevers and inflammatory disorders. It is, as a rule, confined

to the earlier stages of the illness and may be allayed by ice or cold-water cloths, applied to the scalp, or by a mustard plaster to the nape of the neck, but otherwise its treatment becomes merged in that of the general disorder. Its incidence, duration, and degree vary according to the exciting cause, and it sometimes presents features which, when read into the text of the general condition, help to reveal the disease behind it; as, for instance, in influenza, we find the pain is specially intense in the globes of the eyes, or in enteric fever, where it is often the earliest and most continuously persistent symptom, slight in the morning, but increasing in intensity towards evening. In these instances—and many similar might be quoted—the meaning of the headache is subsequently explained by the evolution of the disorder producing it, but regarded *per se*, its own characteristics often serve, from the beginning, to guide the diagnosis. The susceptibility of gouty and rheumatic people to headache peculiar to their diathesis is not sufficiently recognised. In a patient, proved to be gouty from the experience of one or more attacks of classical great-toe inflammation, we are not surprised to find a history of frequent moderate headaches which yield to a dose of calomel and a temporary application of the muzzle, and we regard such occurrences as the inevitable consequence of a sluggish liver or of some passing dietetic indiscretion. But there is another form of headache to which the gouty are liable, which is of much more serious consequence, and which is not infrequently misinterpreted. The pain is of sudden onset and frequently sets in after a time of unusual stress; it is bi-temporal in situation, throbbing in character, accentuated by movement, accompanied by vertigo on any sudden change of position, and frequently increased during the night. It is mostly met with in men of a full habit of body, and is accompanied by a flushed face; a scanty secretion of high-coloured urine, which may or may not throw down a copious deposit of lithates on standing; nausea and loss of appetite; irregularity of bowels, with abnormally pale stools; mental depression and confusion of thought; and by a small, rapid, high-tension pulse, often associated with palpitation and shortness of breath on exertion. This variety of headache is suggestive of apoplexy, and always demands prompt and active attention.

The rheumatic headache is of quite a different type. It affects the epicranial aponeurosis and the tendinous terminations of muscles. The pain is superficial and causes tenderness of the scalp; it is often specially pronounced over certain circumscribed areas of the vertex, or at the seat of one or more tendinous insertions, where small fibrous swellings are not uncommonly to be felt on palpation. It is worst in the evenings, but is subject to constant variations in intensity, and can be readily excited by movements of rotation of the head. In the headache which belongs to renal disease, the pain is dull, severe, and constant; it occupies the entire forehead, and is accompanied by a sensation of fulness within the head, surging in the ears, dimness of sight, and a tendency to slight delirium, and subsequent drowsiness. Confirmatory evidence

of its aetiology is furnished by vomiting and diarrhoea, by the presence in the urine of albumen and casts; sometimes by the existence of retinal changes, and by oppression in the chest and asthma.

The headache which occurs as a prominent symptom of influenza is rapidly relieved by such a prescription as this:—Antipyrin, ten grains; aspirin, ten grains; citrate of caffein, three grains; dispensed in a cachet and given every three or four hours until the pain is relieved. In enteric fever, headache does not yield in the same satisfactory way to analgesic remedies; it is more amenable to chloral hydrate and potassium bromide than to most other drugs. Ten grains of chloral with twenty grains of one of the bromide salts seldom fail to give temporary relief. Bromidia, which is a mixture of chloral, bromide, and cannabis indica, is a useful preparation in many enteric cases; its administration at bedtime often ensures a good night's rest. The headache which so often troubles the person of gouty proclivities ought to be treated on the lines indicated for the management of dyspeptic conditions; but in that form of sudden and severe pain in the head which has been referred to as a specially important incident in patients who have previously suffered from acute gout, more active measures are indicated, and in addition to colchicum, citrate of potash, and the usual anti-gouty remedies, four or six leeches should be applied to the temples, and the bowels ought to be copiously evacuated by a five-grain dose of calomel given at bedtime, followed in the early morning by two teaspoonfuls of Carlsbad salt, repeated every hour until a satisfactory result is obtained. The headache of rheumatism is always relieved by the local application of warmth, and often yields speedily to a combination of chloride of ammonium, twenty grains; salicin, ten grains; and phenacetin, ten grains: given three or four times a day. In renal headache simple diluents should be given freely, and the diet restricted to milk. All the eliminating organs must be stimulated. The skin is most speedily acted upon by pilocarpine given hypodermically in a daily dose of one-sixth to one quarter of a grain, the patient being previously placed in a hot pack where he should remain for an hour. The free action of the kidneys will be promoted by squills, digitalis, spirits of juniper, acetate of potash, or cream of tartar; these failing, success often follows the administration of diuretin in ten grain doses every four hours. The bowels should be excited to purgative action by compound jalap powder in forty to sixty grain doses, or elaterium in a dose of one quarter of a grain, or croton oil in such a pill as this:—Croton oil, one minim; oil of caraway, one minim; extract of colocynth, three grains. When high arterial tension and asthma are obtrusive symptoms, as they often are in advanced cases of interstitial nephritis, their early relief is an urgent necessity. This is sometimes satisfactorily accomplished by the following prescription:—Iodide of potassium, ten grains; the one per cent. solution of nitro-glycerine, two minims; aromatic spirit of ammonia, half a drachm; and chloroform water to half an ounce, to be given every three or four hours.

Another form of headache which demands the constant attention of most of us is migraine—or as otherwise known, on account of its common unilateral distribution, hemicrania. It occurs more often in women than men, is more common on the left than on the right side of the head, and is often hereditary. It is almost as frequent in childhood as in adult life, and generally diminishes or disappears in old age. It is always associated with vaso-motor phenomena, and is frequently accompanied by high arterial tension. It manifests itself in paroxysmal attacks, and is, in many respects, analogous to epilepsy. The two disorders not uncommonly co-exist in different members of the same family. The migrainous attack usually sets in during the early hours of the morning, and is preceded by prodromal warnings such as vertigo, yawning, dancing specks before the eyes, zig-zag patterns, or tinnitus aurum. These sensations correspond closely to the aura that precedes an epileptic seizure. The pain of migraine is accompanied by extreme intolerance of noise or light, and by a supreme desire to be left alone and undisturbed. Finally the attack terminates in a troubled sleep from which the sufferer awakes free of headache, but languid and irritable.

Remedies for the relief of the migraine are almost without number, but the most that can be expected of any of them is a diminution of the severity, and a curtailment of the duration of the pain once the attack has become fairly established. On the first threatenings of an attack, the patient should lie down in a darkened room, and if the cause be immediately antecedent fatigue, ten grains of antipyrin swallowed with one tablespoonful of brandy and water will often, when combined with one or two hours' rest, cut short the pain. In more acute cases such simple measures are insufficient. It is then necessary for the patient to go to bed and to submit to wholesome starvation for twenty-four hours. Primary relief is afforded by the application of cold to the head, and of a mustard-plaster the whole length of the spine. If there is reason to suppose that the stomach contains a quantity of undigested and fermenting food, it should be emptied by an emetic. For the immediate relief of pain there is a long list of analgesic drugs to choose from. I find, in my own experience, one or other of the following combinations most effective:—

(a) Antifebrin, two grains; citrate of caffeine, three grains; lupulin, one grain.

(b) Antipyrin, ten grains; aspirin, ten grains; codeine, one quarter of a grain.

(c) Pyramidon, seven grains; dried bromide of strontium, ten grains; valerianate of zinc, two grains.

To be put up in cachet form, and one to be taken every two hours for three doses, or until the pain subsides. Afterwards the doses to be taken at longer intervals.

In cases of extreme severity, when all the remedies of the foregoing class fail, it may be exceptionally necessary to resort to a hypodermic dose of one-quarter of a grain of cocaine or morphia, the latter being most efficacious if given in combination with one-hundredth of a grain of atropin. When

the migrainous attack is associated with a pulse of high tension, whatever remedy is chosen should be accompanied by nitro-glycerine in one or two minim doses. Between the attacks of pain something may be done in the way of prevention by proper regulation of the daily life as regards diet, exercise, clothing, occupation, etc.; by keeping the liver active with occasional small doses of calomel and rhubarb; and by administering arsenic and cannabis indica in combination with an intestinal antiseptic.

Closely allied to migraine is yet another variety of headache associated with disturbance of one or other branch of the trigeminal or fifth cranial nerve. The most frequent cause of this neuralgic headache is exposure to cold and damp; but it may also be produced by the irritation of a decayed tooth, by disease in the antrum, or by the pressure of an inflammatory exudation or morbid growth near one of the bony canals traversed by a branch of the nerve. The pain is deep-seated, and of a stabbing and burning character. It may involve any of the three divisions of the nerve, and is always confined to one side of the face. It varies in intensity, but in its more severe manifestations it is accompanied by spasmodic unilateral contraction of the facial muscles, and causes the patient to cry out with the agony he suffers; it is then known as *Tic Douloureux*. Tender spots along the course of the affected nerve are characteristic, and are most commonly found at the supra-orbital notch, over the infra-orbital foramen, in front of the ear, or at the seat of exit of the inferior dental nerve. Another, but less common, form of neuralgic headache is confined to the occipital region, and is met with when the posterior branches of the first four pairs of spinal nerves are the seat of disturbance. The first indication for treatment is the removal of the cause when this can be ascertained, and is possible to deal with. The ears, mouth, throat and antra must be investigated, and particularly the teeth should be minutely examined, special care being taken to ascertain that a buried stump or a small root-abscess is not primarily responsible for the pain. The local application of sedatives may succeed in relieving the intensity of the suffering. The following applications are useful for this purpose:

(a) Menthol, two drachms; pure chloroform, two drachms; olive oil, one and a half ounces.

(b) Sulphate of atropine, five grains dissolved in one ounce of distilled water.

(c) Liniment of belladonna, liniment of chloroform, aconite and soap in equal parts.

When the pain becomes very acute it will be found necessary to obtain initial relief from one or more subcutaneous injections of morphia, and, to be effective, the dose must be from one quarter to half a grain. Hyoscine is sometimes more successful than morphia. It may be given hypodermically in doses of one two-hundredth of a grain. In this variety of headache gelseminum, which seems to exercise a specific influence upon the peripheral branches of the fifth nerve, should always be administered. It is well to search for some dyscrasial tendency—gouty, rheumatic, malarial, syphilitic, or anæmic—as a guide to the selection of medicaments which may enhance the curative influence of gelse-

minum, and from the following formulæ that should be chosen which seems best to meet the indications of the case under observation:

(a) Citrate of potash, thirty grains; compound tincture of colchicum, twenty minims; tincture of gelsemium, fifteen minims; decoction of taraxacum, to one ounce.

(b) Salicylate of soda, fifteen grains; antipyrin, ten grains; tincture of gelsemium, fifteen minims; camphor water, to one ounce.

(c) Sulphate of quinine, five grains; hydrobromic acid, half a drachm; tincture of gelsemium, fifteen minims; infusion of orange, to one ounce.

(d) Iodide of potassium, ten grains; Fowler's solution, three minims; tincture of gelsemium, fifteen minims; decoction of sarsaparilla, to one ounce.

(e) Ammoniated citrate of iron, ten grains; acetate of ammonia solution, one drachm; tincture of gelsemium, fifteen minims; tincture of nux vomica, ten minims; peppermint water, to one ounce.

Any of these mixtures may be taken every four or six hours.

In some intractable cases croton-chloral succeeds better than any other drug. It may be given conveniently in this combination:—Croton-chloral-hydrate, four grains; extract of gelsemium, one-quarter of a grain; heroin, one twelfth of a grain: in a pill, every three or four hours until relief is obtained.

Recently cases have, from time to time, been recorded of striking temporary relief being obtained by injecting the main trunks of the nerve at their points of emergence from the skull with an 80 per cent. solution of alcohol, according to Schlösser's method. The administrative technique is difficult, requires the assistance of an anæsthetic, and is attended with a considerable degree of subsequent discomfort.

Time will only permit me to refer casually to a few other forms of headache. That which is caused by organic changes affecting either the meninges or the brain, and which accompanies such conditions as meningitis, intra-cranial tumour, abscess, or hæmorrhage, is deep-seated and continuous, is made worse by stooping or exertion, and is markedly increased at night. Its distribution is often frontal, but it is occipital when the cerebellum is the seat of lesion, and may occupy any part of the scalp in an area overlying a cortical lesion. Among the more important accompanying symptoms are vomiting, optic neuritis, vertigo, irregularity of pulse, ocular or other paralyses, convulsive movements, intellectual aberration, and coma. The headache of syphilis is peculiarly given to nocturnal exacerbation: if it moderates during the day, it will increase in severity towards a certain hour of the night and prevent sleep. In meningitis, the pain is diffused over the skull and is accompanied by pyrexia, photophobia, retraction of the head and delirium. In apoplexy, there is almost always a prodromal headache, limited to one parietal or temporal region, and often accompanied by confusion of thought and vertigo. The headache which results from an intracranial growth should be treated initially by iodide of potassium. If the tumour is specific, the iodide may prove completely curative,

but it is also capable of relieving, to a certain extent, the pain and local congestion induced by non-specific swellings. It is of importance to remember in connection with the administration of the drug in such cases that, to be effective, the dosage must be large—from thirty to forty or even sixty grains three or four times a day. If treatment by iodide fails, and if the clinical signs enable the situation of the tumour to be localised, the question of possible relief from surgical interference must always be considered. When the headache is due to meningitis, thrombosis, or hæmorrhage, treatment of the pain becomes merged in that of the general condition. The headache of eye-strain dependent upon astigmatism, presbyopia, or glaucoma requires ophthalmoscopic and retinoscopic examination for its diagnosis, and its cure falls within the province of the ophthalmic surgeon.

The headache of neurasthenia is probably due to some form of auto-intoxication, and demands for its relief the treatment described as suitable for toxæmic headaches, plus the system of rest, massage, isolation, and super-alimentation associated with the Weir-Mitchell plan of management. It may be worth mentioning that when these neurasthenic cases are associated, as they so often are, with disturbance of the vaso-motor system, distinct improvement often ensues upon the exhibition of ichthyol, which seems to have a specific influence upon the vaso-motor centres as well as an antiseptic effect upon the gastro-intestinal tract. The following prescription has proved of signal service to me in a large number of such cases: Ichthyol, four grains; valerianate of zinc, three grains; extract of cannabis indica, one-third of a grain; arsenious acid, one-fortieth of a grain; iridin, one grain: in capsules thrice daily.

Another common source of headache is met with in the two opposite vascular conditions of plethora and anæmia. The plethoric headache is that which characterises gouty conditions, or threatened apoplexy, already referred to; but it is also met with at the onset of pyrexial disorders, in certain forms of valvular heart disease, after an epileptic seizure, as a consequence of alcoholic excess, or sometimes in sudden menstrual suppression. The pain is best relieved by cold to the head; temporary abstinence from food; diluents; lactate of calcium, or an alkaline mixture containing bromide of potassium; and temporary rest in bed. In cases where the cerebral vessels are very loaded, the most speedy relief is obtained by venesection or the use of leeches, and by sinapisms applied over the abdominal wall.

The anæmic headache is most frequently vertical, but it often assumes the neuralgic type. All remedies which increase vascular tension, accelerate the circulation through the brain, and improve the quality of the blood are serviceable; of these the most valuable are arsenic, iron, and citric acid which may be ordered in many varieties of combination to meet the requirements of individual patients. Causes which contribute to the anæmia must be dealt with as part of the cure. Anæmic headaches are relieved by alcohol, and its administration in moderate quantity, in the form of a light red wine with luncheon and dinner is often advantageous.

MEDICINE.

PELLAGRA.

It would appear from a very complete and able article by Dr. Thayer in the *Johns Hopkins Hospital Bulletin** that Pellagra has definitely made its appearance in Maryland. This disease has lately attracted a good deal of attention in the United States, owing to the considerable number of cases recently reported from the Southern States: in South Carolina it seems clear that pellagra is well established, and has been endemic for, at the least, eighteen years; and Dr. Thayer is convinced that he has encountered two typical cases in the Northern State wherein he works. Originally described in Spain, more than one hundred and fifty years ago, it was soon also recognised in Italy and France. In the latter country it was very prevalent during the first half of the nineteenth century, but is now almost unknown; in the former it is still rampant, as is shown by the fact that there are in that kingdom twenty-two special hospitals for the reception of patients suffering from it. Pellagra exists also in Portugal, the Tyrol, Dalmatia, Greece, Bosnia, and other provinces of Eastern Europe; in Egypt, Mexico, Brazil, the Argentine, Barbados, and New Caledonia.

THEORIES OF ÆTIOLOGY.

From the observed fact that in Italy the disease afflicts almost solely the peasant population, who live very largely on maize, a belief long ago arose that pellagra is a consequence of the ingestion of mouldy or otherwise spoiled corn contaminated by some organism or organisms which, either through their own toxic products or through poisons produced by the decomposition of the maize, or both, give rise to the symptoms. This question has been seriously and carefully debated in Italy, but nothing has been certainly proved either way, and it is by no means settled that maize-eating has anything to do with the origin of pellagra. Nevertheless it is worthy of remark that active preventive measures in Italy are directed mainly to the exclusion of spoiled corn from the dietary of the agricultural classes by the introduction of artificial desiccating machinery, of public store houses, of corn exchanges, and of rural bakeries whence wheaten bread is supplied to the peasants instead of bread made from maize. It is said that the ravages of pellagra are already being considerably curtailed by these measures: considering that in certain provinces the actual mortality rate has varied in recent years from 18 to 36 per 100,000 per annum, and that the mortality rate is reckoned at no more than 2½ per cent. of the cases, it is clear that there is ample room for further improvement.

SEASONAL INCIDENCE OF THE DISEASE.

A very peculiar feature of the disease is its seasonal incidence. The onset of symptoms is

nearly always in the spring, which during the ensuing summer tend to improvement; relapse is not uncommon about October, but by the New Year the patient may be perfectly recovered, only to begin a new attack when the spring again comes round. Two forms, acute and chronic, are described: the former runs a rapid course, marked especially by delirium, fever, and uncontrollable diarrhoea, and ends fatally in a few weeks; the latter may last as long as 25 years, though as a rule each year sees the attack a little more severe and the patient a little more exhausted than before.

SYMPTOMS.

The symptoms of pellagra are described in three divisions, according as they affect (1) the alimentary tract, (2) the skin, (3) the nervous system. Of the first, nausea and dyspepsia are frequent, diarrhoea is especially prominent, and vomiting is by no means uncommon. An aphthous stomatitis renders eating and swallowing extremely painful, and salivation may be most distressing. The cutaneous symptoms, however, are perhaps the most constant and obvious. On the backs of the hands, and in those who go barefoot on the dorsa of the feet, appears a brilliant red symmetrical erythema, which may extend as low as the proximal interphalangeal joints and as high as a point just above the wrists. The skin soon becomes dry and scaly, and then exfoliates, leaving cracks and fissures and a raw red surface: sometimes large bullæ form, containing serum or pus, or even blood. The nervous symptoms are also very constantly found. Disturbances of sensation, spastic paralyses, and weakness of sphincters may be found; the deep reflexes are generally increased, especially in the lower limbs. Vertigo is common.

The symptoms point, as a rule, to varied and continued spinal lesions; and in the spinal cord itself the posterior columns, the posterior nerve roots, and the lateral columns have all been described as sclerotic. Mental phenomena are frequently associated: confusion, weakness of will, depression, and disorientation as to time and place may go on to melancholia with suicidal tendencies, or in some cases to emotional and maniacal states. Finally, dementia is a common termination of chronic and recurrent cases. It is estimated that about a tenth of the patients become permanently insane. Hallucinations of sight and hearing, mutism, delusions of persecution, and so on, are fairly frequent.

THE DISEASE IN AMERICA.

Such is the disease whose appearance in the United States is attracting the attention of clinicians there. It is but seven years since the first case was described, but when once the discovery had been made it came to light that un-

* July, 1909.

recognised cases had been under treatment for at least eleven years. It is somewhat extraordinary too, that, whereas in Europe only the poorest of the poor are attacked, in America there have been numerous cases among well-to-do people, several of whom have rapidly ended in a fatal issue. Although maize is grown in the United States much more extensively than in Britain, it is difficult to suppose that mouldy grain enters into the dietary of such patients; and it is the negro population which consumes by far the larger part of the maize crop. The descriptions given of the two cases which Dr. Thayer has had the opportunity of seeing seem to establish quite clearly the diagnosis; and his warning to American practitioners to look out for the disease is evidently timely. Since visitors from the States are present in England in very considerable numbers at this time of year, and since the maize theory of pellagra is yet unproved, it will be quite worth while for medical men in this country also not to forget that such a syndrome exists, though it is, of course, in the highest

degree unlikely that any cases of it will come to light.

THYROID EXTRACT IN THE TREATMENT.

In the first case of which the details are given there seemed to be symptoms of hypothyroidism superadded to those of pellagra, and accordingly thyroid extract was administered in 2-grain doses thrice a day. The improvement was marked and immediate, and not only did the signs of hypothyroidism rapidly pass away, but the pellagra also in time disappeared, and has not returned. This patient is still, after four years, taking thyroid extract regularly, as she finds that to omit it for a week is followed by the commencing reappearance of nervous symptoms. The question whether the thyroid gland had any direct therapeutic influence on the pellagra is left open, in view of the fact that in several recorded cases it has produced no effect at all. All that the author cares to hazard is the suggestion that possibly a condition of hypothyroidism renders the individual unduly susceptible to the unknown cause of pellagra.

ON A SYNDROME CHARACTERISED BY ABNORMALLY LOW BLOOD PRESSURE, BRADYCARDIA AND ACROCYANOSIS.

THERE is a clinical condition with which many physicians must be familiar, but which has apparently escaped detailed notice until it was described recently by Dr. H. Vincent in Paris under the above title. It is of particular interest, perhaps, in that the patients seem to derive great benefit from treatment by thyroid extract; so much so, indeed, that Dr. Vincent would have us regard the condition as one of the many different types of hypothyroidism.

The patients generally present an appearance of intellectual apathy, with or without definite stigmata of degeneracy, and yet their general health seems good. Quite a number of them have either had acute rheumatism themselves, or else come of rheumatic stock. They do not develop the "syndrome" suddenly, but exhibit it more or less from childhood up. The patients are generally young, and usually female; quite a number are country girls.

Their extremities, particularly their hands, are apt to be cold, and discoloured a purplish-blue. There is often a remarkable smallness of the pulse wave, obvious to palpation as well as to the sphygmograph. Arterial tension, measured by some such instrument as that of Potain, Vaquez, or Riva-Rocci, is notably less than normal. Besides this, there is a remarkable fall in the pulse-rate when the patient lies down. Almost normal in frequency in the erect posture, it falls to 58, 52, 48, 42, and even 40 beats a minute in the horizontal, to rise again when the patient stands once more. It is, as Dr. Vincent terms it, a "*clino-static bradycardia*"; he has noticed a precisely similar condition in certain cases of subacute or resistant rheumatism. Normally, as Graves pointed out, there is a difference of 8 or 9 beats with a change of posture from standing to lying, and *vice versa*. Here the difference reaches 15, 20, 25 beats, or even more; according as the patient is examined standing up or lying down.

At the same time the blood-pressure, already below normal, falls some 20 to 30 millimetres under the same circumstances.

As evidence of hypo-thyroidism in these cases, it is stated that palpation of the neck nearly always shows the thyroid gland to be deficient in size; there may even be an entire absence of one lobe. Moreover, the administration of thyroid gland extract ameliorates the circulatory phenomena in a few days in some cases, or in two or three weeks in others, the acrocyanosis, the bradycardia, and the arterial hypo-tension getting better rather more slowly. The improvement lasts a considerable time, and if the symptoms recur when the treatment is stopped they may be relieved again almost at once on repeating the thyroid gland extract administrations.

Dr. Vincent thinks there may be some connection between these cases and those of Raynaud's disease, and he suggests that thyroid extract might also benefit some of the patients suffering from the latter malady.

The Sugar Test of Water Purity.

It is sometimes useful to be able to obtain an idea of the purity or otherwise of a given water supply without incurring the expense of a full chemical and bacteriological analysis. Among the constituents of sewage are phosphates in comparative abundance. If a clear-glass bottle is nearly filled with the water to be tested, a lump or two of sugar added, and the whole corked tightly and placed in a sunny place for two or three days, the water should remain quite clear. If, however, it contains phosphates in excess, a milkiness will have developed in it, in which case the suspicion of contamination would be sufficiently confirmed to warrant a full analysis of the water supply before any more of it was used for drinking purposes.

SURGERY.

THE WATER TREATMENT OF BURNS.

THE water treatment—or “hydratic management”—of burns is a modification of an old-fashioned and useful procedure known as the wet-bandage method. According to authorities such as Dzondi, Winternitz, Grosse, and others who have used it extensively, it is superior to all other methods in stilling pain, saving lives, and securing good results with a minimum of deformity from scarring. It is easily performed, it is cheap, and it can be undertaken everywhere. Grosse puts it thus: “I heartily join in the hope of Dzondi and Winternitz, that hydratic management of burns will be the treatment of the future, for the sake of suffering humanity.” He points out that in regard to the principles of the treatment of wounds it is generally recognised that that procedure is best which prevents infection, most thoroughly removes secretion, and reduces irritation as far as possible. Finally, the treatment should favour the delicate microscopic processes that occur in the wound and lead to recovery.

Powders and ointments do not fulfil these demands. The former dry up and then form a shield under which germs flourish. Ointments check the removal of secretions more than they favour it. The undesired by-effects of powders and salves have induced many surgeons to prefer wet bandages. The question is, how is a wet compress to be administered to comply with the desiderata given above? It too often happens that the bactericidal power of the applications absorbs attention so that the irritation and other ill-effects exerted upon the wound are overlooked. One should always bear in mind the fact that an agent when killing microbes or preventing them from developing will act likewise upon the growing and proliferating cells of the tissues. Frequent changing of the dressings may be advocated, but surgeons are too apt to employ uselessly concentrated lotions, whereby the vitality of the superficial cell-layers becomes greatly lowered. There is no objection to applying a somewhat higher concentration at first, but very soon better results are obtained by saturating the frequently changed compresses with more dilute solutions. Whatever harm is liable to accrue from the low concentration is overbalanced by the fact that the frequent changing of the compresses brings new quantities of the disinfectant into direct contact with the infected parts. Dr. Grosse advocates no stronger lotions than chinolol, 1 in 2,000; alum acetate, 0.4 per cent.; protargol, 0.25 per cent.; boric acid, $\frac{1}{3}$ to $\frac{1}{2}$ of the concentrated solution; or, for abundant granulations, zinc chloride 1 in 600.

If so wide a surface of skin is burned that a partial bath is impossible, the patient is placed in a full bath, the temperature of which should be from 80° F. to 88° F. to 93° F. The larger the affected area the warmer as a rule should the water be; it may be regulated a good deal according to the patient's feeling and the requirements of the case. After the accident the clothing should not be removed, except for the boots or such loose articles

as can be taken off without a great deal of disturbance. As soon as the first shock and the worst pain are over and all preparations for the continuous bath have been made, the patient should be undressed.

If the burn be local, affecting some portion of the body that admits of a partial bath, only this part is placed in a suitable vessel, again without undressing and without cleansing, except, of course, when the burn has been due to caustic chemicals. The temperature of the local bath may be from 70° F. to 85° F. Extreme degrees should be avoided; the feelings of the patient afford much help in deciding the best temperature in the case. The duration may be from fifteen minutes up to days, the latter in necrosing cases. When the worst of the pain has been relieved the clothes may be removed and the part cleaned, during which process all disinfectants are to be avoided, and even the cleansing done in a somewhat perfunctory manner. Blisters should not be opened. The partial bath may then be continued at a higher temperature—90° F. to 99° F.—for a longer time, or the part dressed as detailed below. When no bath is available, if the whole body is more or less affected, a woollen blanket is spread upon a bed, with rubber tissue over it, and over this again two wet bed sheets, the patient being lifted up on to the latter. The upper sheet is now cut so that each part of the body can be covered separately by wrapping the strips around the parts, or by gently pressing the pieces smoothly upon the surface. One end of the bedstead is elevated a little, and water at 50° F. to 70° F. is poured from time to time without pressure over the aching parts. If the pain ceases, the underlying wet sheets and dry blankets may be closed over the patient to warm him. Cold extremities may be avoided by the use of hot bottles of indiarubber. In case this management is impossible in emergency, the water is simply poured upon the burned undressed patient, or if unclothed he is covered with some cloth to prevent all mechanical irritation. In burns of the first degree the treatment so far outlined will be sufficient. In widespread burns of the second and third degrees the patient is afterwards put into the continuous bath as already described.

If only a part of the body has been burned, this part should be undressed and, without disinfection and cleansing, covered tightly and smoothly with one or two wet layers of fine linen, muslin, or similar material, or two or three wet layers of plain absorbent gauze. According to the locality—for instance, around an extremity—a gauze roller may be wound twice, or these layers may be placed only upon the burned area where rollers cannot be used. These two primary layers remain upon the burn for from one to two days. The object is to save the part from mechanical irritation. Upon them are applied cold compresses wrung out of water at 50° F. to 70° F., removable whenever the pain increases. This means very often at first, even so often as every other minute; but subsequently the

intervals lengthen. If a cooling coil is at hand it may be used with water at a higher temperature up to 65° F., or even 75° F. Extreme warmth over the burned area does harm, and so do ice bags, although, if the burn is upon the hand, forearm, or lower part of the leg, it may be useful to apply ice in one form or another to the healthy part near the burn in addition to the local dressing.

In burns of the first or second degree this treatment will suffice. Blisters, if not too large, will be absorbed within one or two days, or may be then opened and cleared away. The pain caused by the burn at first will by now be gone. In burns of the third degree, however, pus now begins to appear, and inflammatory pain with an inflammatory halo around the burned area. This is the time to remove the "primary layers," as they have been termed above. Pieces of plain absorbent gauze, five to ten layers, according to the quantity of oozing, are now

cut of such shape and size as to cover the burned region exactly. The gauze is wrung out of one of the dilute antiseptic solutions already mentioned, placed upon the wound, and covered with a soft impervious stuff one inch or so larger than the gauze. The dressing is then fastened by a roller that presses the impervious cover all round against the healthy skin in order to prevent drying of the wet gauze. This dressing has to be removed whenever pain arises or the gauze is saturated with pus. Instead of impervious covering and gauze roller it may be preferable to apply over the wet medicated gauze a common wet compress—a towel wrung out of plain water—covered with a woollen cloth or flannel—not with an impervious material. This applies, for instance, to burned fingers where the medicated gauze is applied to each finger separately and the towel over the whole hand.

THE NEED FOR APPENDICECTOMY AFTER APPENDICULAR ABSCESS.

THE older teaching was that in cases of perityphlitic or appendicular abscess there is no need to do more than open and drain the abscess, the general belief being that the vermiform appendix in these cases either sloughs off and disappears spontaneously, or else becomes fibrosed and obsolete, so as to be no longer a likely seat of disease. There has of late been a growing school that advocates emphatically the need for removing the appendix surgically in all these cases, instead of leaving its future behaviour to chance, for in a large percentage of cases of appendicular abscess that have been incised, drained, and apparently cured there has been subsequent appendicular trouble of one kind or another—avoidable if appendicectomy had been performed at or soon after the original operation upon the abscess. Mr. Battle, having analysed a large number of cases expresses this view as follows:—

The statements of those who held that the appendix is obliterated by suppuration around it are erroneous; it is never obliterated but remains

the subject of gross disease which in many instances (20 out of 70) gives rise to a return of symptoms within a short period after the closure of the abscess. The lesions found in those cases in which the appendix has been removed for a return of symptoms do not differ in their character from those found when it has been removed as a matter of routine without waiting for symptoms. Compared with a series of appendices removed for recurring attacks, without evidence of suppuration, the lesions found after removal following abscess are more gross and give fewer instances of apparent recovery from disease. Removal of the appendix after closure of the abscess is a safe procedure, and is not followed by any weakness of the abdominal wall if done in the way suggested (*i.e.* by displacement of the rectus after incision of the anterior part of its sheath, followed by section of the posterior part of the sheath). Moreover, operation at an early date after closure of the abscess enables the surgeon to treat dangerous adhesions and deal with any pelvic disease which may complicate the condition.

PRACTICAL NOTES ON DIAGNOSIS AND TREATMENT.

Camphor in Heart Disease.

A COMBINATION of powdered digitalis leaves 1½ grains with camphor 1 grain, is useful in many cases of commencing cardiac failure. In urgent cases a grain or more of camphor dissolved in olive oil may be injected subcutaneously.

An Incompatibility.

IF calomel or yellow oxide of mercury is ordered as a local application in conjunctivitis, etc., iodine in any form should not be prescribed. When this rule is forgotten the iodine excreted by the lachrymal gland forms a very irritating compound with the mercury, and this may cause much trouble. In practice, therefore, under the above conditions, while syrup of phosphate of iron would be a suitable tonic the syrup of iodide of iron is contra-indicated.

The Treatment of Warts.

MANY cases of multiple warts successfully treated by the administration of magnesium sulphate are on record. A drachm of the sulphate should be ordered two or three times a day, and the treatment should, if necessary, be continued for some six or eight weeks.

Alcohol in Chronic Nephritis.

ALCOHOL in general is to be forbidden; its transitory uses are indicated where there is lack of appetite and disturbance of the heart. A small amount of champagne in the evening may prevent the nightly attacks of uræmia and cardiac asthma, but it should be forbidden as a table beverage. It threatens the heart and the walls of the blood-vessels.—*Dr. W. B. Warrington.*

THE GENERAL PRACTITIONER'S COLUMN.

[Contributions to this Column are invited, and if accepted will be paid for.]

MILD INFLUENZA IN CHILDREN.

By JOHN ALLAN, M.D.(Edin.).

IN the course of general practice many apparently trifling ailments in children are met with, and these ailments may be puzzling both as regards diagnosis and treatment. In not a few cases the illness appears so slight that medical aid is not sought at the time, and it is for the after-effects that advice is asked. I believe that many of these children suffer from mild influenza (which is, perhaps, not recognised as such), an opinion borne out by the condition of lassitude which persists for some time.

The treatment will differ according as one sees the case during or after the attack. If the child is seen when the attack is in progress the history is probably as follows. The child has been listless and feels tired. On examination there is little to be made out. The lassitude is obvious. The temperature, if it is raised at all, is only slightly so, and rarely exceeds 100° F. This is somewhat surprising, because the temperature in children often rises to 102° or 103° F. on very slight provocation.

With regard to treatment the first point is that the child should be kept in bed for a day or two. The irregularity of the heart, which, if carefully looked for, will be found in practically all cases, indicates that there is some underlying condition which should not be lightly treated. With prompt and efficient rest it is marvellous how quickly the heart recovers in these cases. After about forty-eight hours the child can be allowed up and permitted to move about the house, and in a few days' time he is well enough to play and romp about. In these mild cases treated by rest cardiac stimulants are not necessary, and during convalescence a general tonic containing iron and arsenic will act effectively.

The diet for the first day or two will of necessity be light, because the child is disinclined for food and may be sick. Therefore, milk, beef-tea, custard, chicken jelly, and the like should be given. As soon, however, as the stomach can tolerate more solid food, the diet should be increased, and the child should be encouraged to eat as much as possible. A generous, nutritious, and easily digested diet will do more to hasten convalescence than almost anything else.

Many drugs have been advised. The late Sir William Broadbent believed in quinine. His favourite prescription was ammoniated tincture of quinine and liquor ammoniæ acetatis. In the presence of an epidemic of influenza he had great faith in two-grain doses of quinine once daily as a prophylactic measure. Sodium salicylate is preferred by some. Dr. T. W. Banks, a practitioner in Lanarkshire, treats his cases of influenza by giving the patients powders of salicylate of soda and antefebrein. His experience is that three powders, one every four hours, will check the attack. In my opinion both quinine and salicylate of soda are objectionable for children, because the intensely bitter taste of quinine and the sweet mawkish taste of salicylate of soda are not such as to commend these drugs to them. It is advisable to prescribe for

children drugs which have not pronounced tastes. In acetyl-salicylic acid we have a drug which is easily taken and is efficacious. The drug may either be given in powder or in a mixture flavoured with orange or lemon syrup. The latter method is to be preferred for children. An initial dose of 15 grains should be given when the child goes to bed; then 10 grains every six hours for the next 24 hours, and thereafter for the next few days, 5 grains thrice daily. This dosage is suitable for a child ten years of age. It may be mentioned that a child need not be kept in bed because he is taking 5 grains of acetyl-salicylic acid three times a day, as in these doses no sweating or discomfort is caused. As a substitute for quinine euquinine appears to be excellent, and those who have had much experience with it speak highly of it. I myself have only used it in a few cases, but always with satisfactory results. In one case of mild influenza in a child 5 grains of euquinine four times a day were given, and appeared to act efficiently. The drug, therefore, would appear worthy of a trial. It is stated to be incompatible with acids.

Let us now consider the treatment of mild influenza when advice is sought a week or two after the actual attack. The history is that ten days before the child felt tired and complained of a feeling of general soreness throughout the body. There was anorexia, and the child perhaps vomited on one or two occasions.

On examination absence of alertness and lack of energy are marked features, and on being asked to walk once or twice round the room the child will soon begin to drag his legs. The child appears in general terms to be suffering from debility. On auscultation cardiac irregularity is quite apparent, and in some cases bruits can be detected.

The child should be put to bed for a few days. There is at this stage no necessity to limit the diet to fluids, and every effort should be made to encourage the child to eat. Moderate doses of acetyl-salicylic acid are distinctly beneficial and should certainly be prescribed for a few days. The heart will not now quickly respond to rest simply, and it is advisable to give small doses of strophanthus and strychnine to stimulate the cardiac muscle. Four minims of tincture of strophanthus (B.P., 1885) and one or two minims of liquor strychninæ will generally suffice for a child of ten. During convalescence tonics should be given, and the child should not be forced to indulge in undue exertions for some weeks.

Influenza seems to have a special affinity for the heart in the child, and the severity of the attack is no criterion of the damage that may be done to that organ. Indeed, my experience has been that the mild evanescent attacks of influenza are just as likely to affect the heart as the severe ones. With careful treatment there is no reason to fear permanent damage to the heart, but neglect is only too likely to result in irretrievable injury and to cripple the child when he reaches adolescence and manhood.

MEDICO-LEGAL POINTS.

SOME GENERAL ASPECTS OF POISONS—III.

AMMONIA.

THE vapour of strong ammonia is poisonous. It may destroy life by producing violent inflammation of the larynx and of the lungs. The vapour produces a feeling of choking, with a sense of great heat in the throat: it appears to suspend the power of breathing, and the pain and heat in the throat remain for a long time. Solution of ammonia applied to the skin acts as a corrosive, and may inflame or cause the destruction of the parts which it touches. At the Stafford Summer Assizes, 1873 (*R. v. Gavan*), a man was convicted of throwing an ammoniacal liquid over the prosecutrix with intent to injure her. It was a liniment containing a strong solution of ammonia. The liquid was thrown in her face, and some portion reached the eyes; but she recovered from the effects. A weak solution acts as an irritant to the skin, while a strong solution causes vesication and destruction of the part. A very interesting report is given by Dr. Fairbrother (*St. Louis Med. and Surg. Jour.* 1887, vol. lii., p. 272), where three men lost their lives and a fourth was permanently injured by an accident when setting up an ammonia ice-machine. They were exposed to the gas for some three minutes. One when dragged out was comatose and unconscious, and died in fifteen minutes. Another was suffering as though from chloroform in the stage of excitement—i.e. he was unconscious in wild delirium, and could not stand. He was not improved by the injection of half a grain of morphine sulphate, and died suddenly in two hours. The third was entirely conscious and walked home. He could swallow readily, and talk easily, but complained of occasional difficult breathing, and after five hours' time, in a sudden attack of dyspnoea, he gave two or three gasps and died. The last suffered from bronchial irritation for some months. His leg was broken by the fall and had to be amputated, and he became partially paralysed on one side.

SULPHURIC ACID.

This substance was known to the alchemists, and has been an article of commerce since the Middle Ages under the common name of oil of vitriol. The term oil of vitriol is strictly applied only to sulphuric acid, which has an oily consistency and a great specific gravity (from 1.800 to 1.845). It was so called because it was obtained by the distillation of green vitriol, of which it was considered to be the oil or spirit. It is in this state eminently corrosive, and this corrosive property is lost when the oily consistency is removed by dilution with its bulk of water. Sulphuric acid is frequently taken as a poison by suicides, but probably there is no case in which the sufferings of a person before death are more intense. Sulphuric acid, in common with the other mineral acids, is not often used for murder, the taste betraying the attempt to the victim, and the symptoms of death from it being characteristic.

Cases, however, have been occasionally reported where it has been purposely administered to children, and also to intoxicated adults, with fatal results. It is not uncommonly used for suicide, especially among the lower classes on the Continent. This strong acid is not infrequently used for throwing upon the face and hands of rivals or enemies. This practice is largely confined to the gentler sex, and often results in terrible and permanent disfigurement, and sometimes a very serious injury to the health.

ANTIMONY.

Tartar emetic, which is so largely used in medicines, has given rise to most of the cases of antimony poisoning. It is a white crystalline solid readily soluble in water. It may cause both acute and chronic poisoning, some of the cases of criminal poisoning recorded being of the latter variety. Criminal poisoners rarely resort to one big dose of antimony for their purposes; they more commonly give small doses at intervals. The principal symptoms produced by tartar emetic given at intervals in small doses to healthy persons are those of gastro-intestinal catarrh, namely nausea and vomiting of mucous and bilious liquids; great depression, watery purging, followed often by constipation of the bowels; small, contracted, and frequent pulse; loss of voice and muscular strength; coldness of the skin, with clammy perspiration; and death from exhaustion. Several cases have occurred which show that tartar emetic has been thus criminally employed. In addition to the cases of Ann Palmer and J. P. Cook, there are those of *R. v. M'Muller* (Liverpool Summer Assizes, 1856); *R. v. Freeman* (Drogheda Spring Assizes, 1857), and the cases of the James family at Liverpool (*R. v. Winslow*, 1860, 8 Cox, C.C., 397). The prisoner Winslow was indicted for the murder of his mistress, Ann James. It was clearly proved that antimony had been administered to the deceased not only from the symptoms, but by the detection of the poison in the urine during life. The deceased was at the time labouring under malignant disease affecting the cæcum and stomach, but it was alleged that her death had been accelerated by antimony. The prisoner was acquitted, owing to the difficulty of proving the act of administration. The poison had been given at intervals in small doses, and as deceased survived about a fortnight after the last dose, it was found only in traces in the various organs. The death of this woman led to the exhumation of the bodies of three of her relatives who had lived in the same house with her and the prisoner, and had died some months previously under suspicious circumstances. The viscera of these bodies were examined, and in each case antimony was found in small quantity, but still extensively diffused through the organs. So far as the history of their cases could be obtained, they

were victims of chronic poisoning by antimony. This cause of death was not suspected at the time.

It must be remembered that the discovery of antimony in the contents of a stomach is by no means a proof of its having been taken or administered as a poison, since tartar emetic is frequently prescribed as a medicine, and often taken as such by persons of their own accord. The presence of any quantity, if not lawfully administered as a medicine, is always a suspicious fact, and demands explanation. In two cases of criminal administration in small doses the quantity found in each body did not exceed three grains. The detection of antimony in the tissues does not necessarily indicate that it has been criminally administered nor that it has caused death: but its presence should be reasonably accounted for, as antimony may have been unlawfully administered. In several cases of suspected death from poison, deposits on copper, evidently of an antimonial nature, have been obtained from the liver or tissues. On inquiry it has been found that antimonial medicines had been taken shortly before death. Conversely, when no antimony is found, or the metal is present in the tissues in minute quantity, it is still consistent with medical experience and observation that the person may have died from antimony.

An extraordinary trial for murder by alleged poisoning with this substance took place at Annapolis, U.S.A., in 1881. Mrs. Wharton was charged with poisoning her friend General Ketchum. The trial lasted fifty-two days, and a huge amount of scientific evidence was brought forward for the prosecution and defence, apparently owing to the high social position of the parties. The General died after a short illness, but the symptoms, taken as a whole, bore no resemblance to those observed in poisoning with antimony, although poisoning was suspected during life. The appearances in the body proved nothing for or against antimonial poisoning, and some physicians of experience deposed that the symptoms and appearances were consistent with disease affecting the membranes of the brain and spinal marrow. On examining the chemical evidence, it appears that sulphide of ammonium alone was employed for the detection of antimony, and a red-brown sulphide resembling that of antimony was obtained; but the quantity obtained as sulphide was only four-tenths of a grain, estimated as equivalent to eight-tenths of a grain of tartar emetic. Thus the chemical analysis brought out only a fraction of a grain, not amounting to one-twentieth part of the quantity said to be present; and no separation of antimony in the metallic state was made to corroborate the inference drawn from the coloured precipitate produced by sulphuretted hydrogen. No chemical results were produced in court, although 20 grains would have allowed of the production of metallic antimony in a few minutes by copper, tin, zinc, and platinum, or by Marsh's process. The evidence that antimony was really there was not satisfactory, and that 20 grains were present in the stomach was wholly unproved. The chemical evidence does not therefore conflict with the pathological evidence, for it failed to show with clearness and distinctness the presence and propor-

tion of the poison said to have been found. The prisoner was acquitted. (*Amer. Jour. Med. Sc.*, April 1872, p. 329.)

SALTS OF COPPER.

Acute poisoning by salts of copper is not common. It is seldom that these poisons are designedly administered with homicidal intentions, since their detection, both by the colour and taste is easy. A husband attempted to poison his wife by adding verdigris to a dish of beans. The bad taste prevented her from eating them. He buried the cooked mess in his garden, from which it was disinterred, and then examined by chemists. They proved the certain presence of the metal. He was condemned to hard labour for life (*Jour. de Chimie, Chevalier*, 1854). Cases of poisoning from these salts may, then, be divided into those in which a large dose is swallowed, either by accident or with a view to suicide, and those which proceed from the contamination of food by unclean copper vessels, or by the salts of copper used as colouring matters for confectionery, etc., the injurious qualities of which will depend upon the amount of contamination. If metallic copper is subjected to the action of water, acetic acid or vinegar, or hydrochloric acid, it is not affected unless the fluid is in contact with air or oxygen; so that copper vessels can be used for cooking if the fluid be removed from the copper vessel while it is hot; in which case the vinegar, fatty acids, or water will have no effect upon the copper; but if the fluids be allowed to stand in the copper vessel for several hours when cold, air is absorbed, the copper is in part oxidised, dissolved by the acid, and impregnates the food.

HYDROCYANIC ACID AND ITS SALTS.

Hydrocyanic acid is a transparent, colourless, volatile liquid, with a pungent, acrid taste, which latter may be easily concealed in its administration in medicine or alcoholic beverages. It has a peculiar odour, often likened to that of bitter almonds, or the kernels of peach stones. Hydrocyanic acid may be obtained from many vegetables, as from bitter almonds, apple pips, the kernels of peaches, apricots, cherries, plums, and the root of mountain ash. Prussic acid does not exist ready formed in these plants, but is the result of the reaction of water upon amygdalin in the presence of a ferment emulsion. Hence, if any of the above substances are found in the stomach, the question may arise whether the indications of the presence of prussic acid are due to their decomposition or to the acid swallowed as such. The only manner in which doubt, arising from this circumstance, can be satisfied, is the obtaining by chemical analysis of a larger quantity of the acid from the contents of the stomach than these substances could yield.

BOOKS RECEIVED.

DIGBY, LONG AND CO.

"Gates of Brass." By Mrs. Aubrey Richardson.

ELLIOT BOOTHROYD.

"Low's Handbook to the Charities of London."

REBMAN, LIMITED.

"The Maniac."

MOTING NOTES.

THE REINFORCED INNER TUBE.

THIS invention, which has recently attracted considerable notice on account of its many advantages, is well worth the attention of the medical motorist, and, indeed, of all who wish to obtain the maximum of wear out of their covers. The tube, which is an American invention, differs from the ordinary form in the fact that it is reinforced with an inner lining of high grade Sea Island cotton fabric (two-ply in small sizes, three-ply in the larger sizes) covering the portion of the tube that usually blows out, pinches, and punctures. The tube thus does not rely for its support upon the outer cover, but has an auxiliary one of its own. At the rim side or base of the tube there is a narrow strip of strong pure rubber to allow the necessary expansion and contraction, making it possible for the tube to adjust itself readily to the cover. The tube is claimed to be reinforced to such an extent as to add 40 per cent. to the strength of the tyre without extra weight or lessening the resiliency, and to prevent blow-outs, rim cutting, pinching, and many other of the troubles experienced with ordinary tubes, whilst the makers state that the reinforced tube is sufficiently strong to sustain the weight of the car while running on a damaged cover. In order to demonstrate the advantages of the new tube, some comparative tests were made some time ago in the presence of a large number of motorists and other interested spectators.

An ordinary inner tube was first inserted in an outer cover with a large hole in it, and inflated to a pressure of about 40 lbs. The car to which the tyre was applied was driven a short distance, when the inner tube burst with a loud report. One of the reinforced tubes was then inserted in the same damaged cover, and the car was taken for a short run in the town, the tube still remaining intact when the vehicle returned; although it had been blown up to a pressure of 62 lbs. before starting. The advantages of this inner tube over the ordinary variety are apparent to all, the most important being the fact that old covers which are impossible of repair for use with the ordinary tube and which are usually deposited on the scrap-heap may, by use with the reinforced tube, be repaired and give a very considerable mileage. The Royal Automobile tests have proved that there is no loss of resiliency, and that it possesses this quality in precisely the same degree as the best-known standard tubes. The club tests have also shown that covers can be run over 1,000 miles with large bursts, so it is obvious that with such bursts repaired a very considerable mileage can be obtained from an old cover by means of this invention. It is put on the market by the Reinforced Inner Tube Company, of 218 Shaftesbury Avenue, London, W.C., who will be pleased to forward full particulars to applicants.

SOME PRACTICAL NOTES.

IN replacing sparking plugs in hot cylinders they should not be screwed up too tightly or considerable difficulty will be experienced later in any attempt to remove them.

NOVICES will do well to remember that it is always safer to declutch when turning a corner, as the car can be more readily brought to a stand by the brakes, and, furthermore, the rear wheels can roll round the curve without slipping, while with the engine driving there is a decided tendency for the inner rear wheel to slip, which, of course, in time wears the tyres.

TROUBLE is often experienced with magnetos owing to over-lubrication. Sufficient oil to lubricate the bearings properly is all that is required, and any excess will sooner or later find its way on to the contact breaker points, and interfere to a greater or lesser extent with the contact. This in turn prevents the proper working of the machine.

It occasionally happens that the stem of an exhaust valve is somewhat longer than it should be, so that the valve is prevented from closing properly. The spare exhaust valve, which should invariably be carried, ought always to be examined for this defect (which is best done by placing the valve in position and seeing whether, when it is closed, there is the usual clearance between the end of the stem and the tappet), and if found too long it should be filed off.

A VERY handy thing for the motorist to keep in his tool-box is an assortment of wire nails of various sizes. These nails may be used for a variety of purposes, especially for replacing split pins, etc.

THE cutting of motor tyres by the rims is generally caused either by overloading or lack of sufficient inflation. If the tyres are called upon to carry a greater load than their dimensions are calculated to bear no amount of inflation will keep them from flattening under the excessive load. This invariably results in the cracking and breaking down of the cover at its weakest point—where the flange engages the beaded edge. Rusty rims are also to be avoided, and they should occasionally be gone over and cleaned of any rust that may have accumulated. A coat or two of enamel will often prevent further corrosion, or the rims may be given a coat of wax. This is a satisfactory way of treating the rusty rims of an old car. The metal rims should be well scraped and sand-papered, and the wax should be heated and applied in a liquid state. It will not injure the rubber, and by keeping out the air it prevents further rusting of the metal. The surface of the rim which comes in contact with the inner tube should be smooth. If rough, it is likely to damage the tube, in which case the rim should be wrapped with a layer or two of tape, the loose ends being solutioned in place.

"VIATOR."

POST-GRADUATE MEDICAL SECTION.

THE IDEAL GRADUATE STUDY INSTITUTION.—WHAT GERMANY HAS DONE.

IV.—CONCLUSIONS AND THE MORAL.

In the preceding articles we have briefly sketched the rise and development of an organisation which, although not the oldest* post-graduate study association in Europe, must yet be considered as undoubtedly the best and most complete. We have thought it advisable to do so, because the Central Committee for the Promotion of Graduate Study in Prussia appears to us to have solved the problem of graduate study, and to have set about the work of organising such study in an ideal manner which is in every way worthy of imitation. Let us shortly recapitulate what that ideal consists of and what the means are by which it is carried out.

The main features of graduate study as carried on under the auspices of the Central Committee are that the courses are (1) both practical and theoretical, comprising all subjects of interest to the general practitioner and calculated to further his knowledge; (2) free; (3) given at times convenient for general practitioners engaged in private practice to attend; (4) and at places close to their sphere of practice; (5) with a membership limited to qualified men engaged in general practice. In addition, there is (6) a central main institute that serves as a bureau for information, as a domicile for special courses, and as a general centre for the whole movement.

1. The courses are practical and theoretical, and are given all the year round. Subjects are chosen of practical interest: the special work, of interest to the man with a hobby, is not made paramount, although practitioners can always obtain a course in some special and out-of-the-way subject. The theoretical courses, in the shape of lectures and demonstrations, are unlimited so far as membership is concerned. Practical work is done in small batches, which allows of individual assistance by the demonstrators and prevents crowding. Too much stress cannot be laid upon the fact that both special, practical, and theoretical courses are given by professors who are experts in their subjects, not by young docenten, who, however able to teach students, are hardly the men to lead a class of qualified men. One of the finest features of the organisation is the fact that men who have a world-wide reputation have come forward and volunteered to give up several hours a week for the benefit of their colleagues in general practice. Thus during the present year such courses were given by Professors von Renvers ("Novelties in Medical Diagnosis of Interest to the Practitioner"); Israels ("Points in Pathological Anatomy"); Körte ("Surgical Diagnosis"); Jansen ("Diseases of the Ear"); Silex ("Diseases of the Eyes"), and Eulenberg ("Mental Maladies in Private Practice"). The practical work, with demonstrations, is made interesting by means of the fine collection of demonstration specimens and the excellent apparatus with which the laboratories are fitted.

2. The courses are free; all that the practitioner has to pay is a "card fee" of two marks, which covers expenses of printing and secretarial work. Beyond this he has absolutely no expenses, except his personal outlay in tram fares. Apparatus, specimens, and the necessary outfit for each course are provided by the institution free of charge.

* The honour of having started the first post-graduate institution must belong, *mirabile dictu*, to the little-known and from a medical point of view interesting country Russia. At St. Petersburg exists the fine Helena Paulowna Post-Graduate Institution, founded in 1875, of which we hope to give a full description in a future issue.—ED. THE HOSPITAL.

3. The hours for the courses are arranged to suit the convenience of members. At the first meeting of the class the professor or demonstrator suggests the time that would suit him, and invites suggestions from the class. These suggestions, often conflicting, are then amicably discussed, and a compromise arrived at which suits the majority. Here, as in other things, small sacrifices are inevitable, but the main sacrifice is usually on the part of the demonstrator.

4. The courses are held either at the Kaiserin Friedrich Haus or, where clinical demonstrations are required, at the hospitals in the vicinity. The central position of the institution suits this arrangement admirably, and hitherto the directors of the large city hospitals have worked harmoniously with the institution and given every facility to the general practitioner.

5 and 6. The advantages of the points included under these paragraphs need not be elaborated, as they are obvious to everyone.

Such, then, is the work of the Central Committee, and the English graduate who becomes acquainted with it can only envy his German colleague the opportunities and facilities which it affords the latter. The question remains whether he cannot try to imitate the work and to bring about in England a similar organisation, a similar central bureau, and similar facilities for graduate study. Discussing the matter with Professor Kutner, we pointed out the fact that the Polyclinic in London already to some extent does the work that is done by the Kaiserin Friedrich Haus. At the same time, we could not help calling to mind the points on which we had already laid stress in discussing the limitations of that institution. We there drew attention to the fact that the Polyclinic student lacks the opportunity for actual ward and clinical work, that the fees are comparatively high, and that the institution cannot at present be looked upon as a thoroughly representative one. The good points in the Polyclinic system were thoroughly grasped by our German colleagues, who in particular expressed their admiration of the system that permits the practitioner bringing his private patient for combined consultation and demonstration—a system which it is hoped to introduce in the German institution at an early date. "Surely," remarked Professor Kutner to us, "it would not be difficult, in so rich and generous a country as England, which supports its main hospitals by voluntary contributions, surely it would not be difficult to have an organisation and a central institution similar to the one here at Berlin and the institutions in Russia." It is a remark with which we heartily concur, and the success of the German movement should serve as an encouragement to those who look forward to the realisation of the hope that England in the near future may not be behind Germany and Russia in the development of graduate study in medicine.

At the International Medical Congress, now in session at Budapest, an important resolution will be brought forward by the Directors of the German and Russian Post-Graduate Associations. This resolution will voice the desire, felt by all graduate students, that the facilities for the prosecution of graduate study should be international, not local merely. Medicine belongs not to one country or one race; it is for all humanity, and the internationalisation of graduate study, the regular exchange of literature, information, and lists of courses, which is at present done

spasmodically and without system, will do more to promote the good feeling and common interests between medical colleagues in various countries than the holding of congresses which are attended by specialists only. In going round the permanent exhibition in the Kaiserin Friedrich Haus we regretted the absence of British manufactures, English books, and any sign of British activity in the general advance of medicine. This omission can easily be rectified, and it will be in the interests of English medicine and English manufacturers to see that it is rectified as soon as possible. Equally important is it that British graduate study organisations should be represented at the Budapest Conference, to take their part in the discussion and to join the international committee for the promotion of graduate study in medicine and dentistry which it is proposed to form. We take it for granted that none of our readers will join issue with us on the statement that the promotion of graduate study in medicine and dentistry is a matter that is of primary importance in England as it has been found in other countries. The question of the relative value of the medical student's education is not one that need concern us here, for the fact remains that, no matter how well educated the student has been, he is unable to keep up his knowledge in the course of a busy life of private practice, or to remain in touch, unless he is connected as a teacher with one of the large medical schools, with the most recent advances in medicine. Equally true is it that a large number of general practitioners will gladly avail themselves of any opportunities offered them for increasing their knowledge, so long as these opportunities are given on lines similar to those which exist in Germany. That is to say, the three primary considerations that constitute the ideal—the courses should be absolutely free, given at times and places suitable for the man engaged in general practice, and essentially practitioners' and not students' courses—should be paramount. We need not labour these points, but it may be permitted here briefly to consider the manner in which such an ideal may be realised in England, and to take advantage of the lessons to be gained from a consideration of the German system.

The desirability of having a central institution which would serve as a general bureau and as the headquarters of any organisation, seems to us to be obvious. That such a central institution should be evolved out of any already existing organisation, associated with any particular hospital, college, or medical school is scarcely to be expected, nor, indeed, is it to be wished for. A movement in which the whole Empire should participate is not to be made to serve as a splendid advertisement for any particular institution or school; nor, again, is it to be localised in a place such as Oxford or Cambridge, whose associations with medicine are far less well known or generally recognised than those of our larger cities. The site for such an institution should be the Metropolis, but it should form branches, locally independent but in close touch with the headquarters, at various extra-metropolitan centres where sufficient material exists and sufficient interest is displayed to warrant the establishment of regular or periodical graduate courses. Such an institution, modelled on the lines of the Kaiserin Friedrich Haus in Berlin, and managed by as representative a board as that which looks after the latter institution, would serve many useful purposes, the enumeration of which need not be given here. Nor would its elaboration entail a colossal or extraordinary expense. The Berlin institution was built, equipped, and rendered practically self-supporting at a total cost of less than £60,000; the Helene Paulowna Institute was built and equipped at an even smaller sum, although it is annually receiving a State grant in its support. Making due allowance for the in-

creased cost of labour and material in England, one may put the total cost of a similar institution in London at £100,000—a sum which is by no means excessive in view of the extended usefulness of such an institution. As in Berlin, the London institution with proper management can be made to be self-supporting. The question of State aid is one that we need not go into here, but we would merely point out that such an institution would deserve, for obvious reasons, the warm support of the Colonies and the equally cordial support of the various municipalities. At this time, when the medical inspection of school children is prominently before the public, and when, as we pointed out recently, the reform of the dental profession is imminent, the value of the services that such an institution can render to the nation is incalculable.

In order to bring it into being there is needed the interest of the medical profession more than an appeal to the generosity of the public. The main persons concerned directly in the promotion of graduate study are the practitioners themselves, and from them, and from the leaders of the profession must come the initiative in any movement that may lead to the establishment of such an organisation. The success which has been obtained in Germany would not have been won unless the medical profession there had energetically and actively interested themselves in the scheme, and by their endeavours stirred up the public to assist in the venture. On similar lines, any movement initiated here must be developed. We do not doubt that once such a movement is started, whole heartedly, sincerely, and unconnected with any particular association, hospital, or already existing body, it will achieve success and win for the general practitioner in England as fine an organisation and an institution as to-day exist in Germany. The proposal, made some years ago, to establish a post-graduate school in connection with a special academy for the study of comparative medicine is one which we energetically and emphatically must refuse to consider. We admit fully that a school of comparative medicine is an urgent desirability—though we do not admit that Cambridge or Oxford has a prior claim to it than London or Liverpool—but to make such a school an adjunct to an institution which must, if it wishes to adhere to the ideal of post-graduate study, rigidly exclude the unqualified student, is to stultify the usefulness of the latter. The separation of qualified from unqualified students in the German courses is one of the most praiseworthy features of the German system, and it is a feature which should be the dominant one in any system of graduate study.

Such a movement as we have attempted to outline is worthy the cordial support of Royalty. His Majesty the King and his Royal Highness the Prince of Wales have shown themselves in warm sympathy with the development of medical study, and have repeatedly given proof of their interest in matters connected with the profession. Their interest in the post-graduate study movement, seeing that it concerns no individual hospital or university but affects the mass of the profession, and indirectly the welfare of the whole community, will be an impartial and general interest which can only serve to encourage and stimulate those who are working to attain to the success which has crowned the German example.

RUSSIAN MILITARY TUBERCULOSIS SANATORIUM IN FINLAND.—According to *Helsingfors Hufvudstadsblad*, the Russian Ministry of War is erecting at Jerijoki, in the heart of the Finnish forest domains, a tuberculosis sanatorium for the men of the Russian regiments of the Guards, capable of accommodating five hundred patients; it is considered by high medical authorities in Russia that the balmy, dry, and resinous air of the Finnish pine-forests is highly beneficial in the arrest of this terrible disease.

THE ANTI-VIVISECTION HOSPITAL.

THE correspondence, which we publish this week, between Sir Henry Burdett and the Secretary of the Anti-Vivisection Hospital is a good example of the difficulty of getting a plain answer to a plain question. It is true that the question was implied, not spoken; still, it was a plain question. The hospital was charged, at a public meeting, with Pretentious Humbug. What is Pretentious Humbug? To treat a case of rabies with a "Buisson bath," to treat a case of laryngeal diphtheria without anti-toxin, to call that anti-toxin "animal filth," to advertise "No experiments on hospital patients" when the whole hospital is an experiment, to advertise "No vivisection in its school" when there is no school—these acts are of the nature of Pretentious Humbug. The question is plain as plain can be.

That a Buisson bath "for the prevention or cure of hydrophobia" is, or was, installed at the Anti-Vivisection Hospital is certain; it is certain, also, that this absurd bath has been puffed, as it were Mother Seigel's Syrup, for its power of "drawing the poison out of the veins." That the senior physician of the hospital about a year and a-half ago called diphtheria anti-toxin "animal filth" at a huge public meeting in the Battersea Town Hall was reported in the *Times*. That the hospital does not admit diphtheria cases, and would not give them anti-toxin, may be gathered from the evidence given by one of its staff before the Royal Commission. That experiments are indeed made upon its patients may be gathered from a speech made by another member of its staff; he is reported to have said that one member of the staff was a homœopathic practitioner, and that they "worked well together," or words to that effect. How can a regular practitioner and a homœopathic practitioner work well together without experimenting on a patient?

Again, the general contempt which is felt in the medical profession for this hospital is strengthened by the outspoken statement made at the Mansion House meeting by Mr. Bryant, and by the senseless quarrelling which from time to time cannot be hid within the hospital, and finds its way into the public papers.

With regard to the special instances taken by Sir Henry Burdett, we have, for Lord Lister's work, Lord Lister's own statement, that his work, till he "welcomed Pasteur's demonstration" was "all in vain." And what was Pasteur's demonstration, but the demonstration, in animals, of the specific causes of wound-infection? For the testing of the sputa for tubercle-bacilli, which, happily, is done at the hospital, we can only express our amazement that the hospital should use this test, and should still proclaim itself as opposed to all experiments on animals. For it is absolutely certain that the specific cause of phthisis was proved by experiments on animals, and without them could not have been proved.

It is reported that they who are directly responsible for the continued existence of this hospital have refused the grant which was made to it by the Metropolitan Hospital Sunday Fund. The grant was accompanied with hard words such as leave a black mark that does not soon come out. All the same, there is no present evidence that the hospital will "mend its ways, purge its methods, and fall into line" with better hospitals. It has made its bed, and must lie on it. Slowly, but surely, the cause for which it is supported by kind-hearted people is losing strength among the educated classes. The hope is that the hospital, in years to come, will quietly drop its present name, and make other necessary changes in its general behaviour; and so, at last, win from the medical profession that confidence which is given to other hospitals.

CORRESPONDENCE

BETWEEN SIR HENRY BURDETT, K.C.B., K.C.V.O., AND THE SECRETARY OF THE NATIONAL ANTI-VIVISECTION HOSPITAL, BATTERSEA GENERAL HOSPITAL (MR. G. W. F. ROBBINS).

We have received from Mr. Robbins, Secretary of the National Anti-Vivisection Hospital, certain correspondence which has taken place between him and Sir Henry Burdett. On receiving this correspondence we sent a member of the staff to inspect the Anti-Vivisection Hospital in accordance with our practice in these cases, but he was refused admission. We have also obtained copies of the letters omitted by Mr. Robbins from the correspondence.

I.

From Mr. ROBBINS.
National Anti-Vivisection Hospital,
The Battersea General Hospital (The Anti-Vivisection Hospital),
Battersea Park, London, S.W.,
July 29, 1909.

To Sir HENRY BURDETT, K.C.B.

DEAR SIR,—At a meeting of the Council of the Metropolitan Hospital Sunday Fund you are reported (vide *Daily Telegraph* of this date) to have said that the medical profession knew perfectly well that they must employ remedies which would not have been available had it not been for discoveries resulting from vivisection. If you are so correctly reported would you kindly tell me of any remedy which we must employ here, and which could only have been discovered by vivisectional experiments of animals; and also how you would prove this as a fact?

Yours very faithfully,
(Sgd.) GEORGE W. F. ROBBINS,
Secretary.

II.

From Sir HENRY BURDETT.
The Lodge, Porchester Square, W.,
July 30, 1909.

DEAR SIR,—I have received your letter of July 29, which I observe misquotes the report that appeared in the *Daily Telegraph* to which you refer.

Yours faithfully,
(Sgd.) HENRY C. BURDETT.

GEORGE W. F. ROBBINS, Esq.,
Secretary, National Anti-Vivisection Hospital,
Battersea General Hospital, Battersea Park, S.W.

III.

From Mr. ROBBINS,
National Anti-Vivisection Hospital and Battersea General Hospital,
Battersea Park, S.W.

July 30, 1909.

To Sir HENRY BURDETT, K.C.B.

DEAR SIR,—I am in receipt of your note, and on comparing my letter with the cutting from the *Daily Telegraph* I find that the words "in the treatment of disease" were omitted. The paragraph was read out to me, and since these words are hardly such as would not necessarily be implied, I feel sure that the chance omission will not cause you to evade the very important and interesting questions I addressed to you.

I think you will find that the following is an absolutely correct quotation of the report, dealing with your remarks. I give the whole paragraph now:

"He hoped its authorities would purge themselves of the pretentious humbug involved in the claims they put forward as to the special advantages of treatment in that hospital from the anti-vivisectionist point of view, because the medical profession knew perfectly well that in the treatment of disease they must employ remedies which would not have been available had it not been for the discoveries resulting from vivisection."

I should be glad, therefore, if you would inform me whether you are correctly reported as above, and, if so, I shall be obliged by your naming any drugs—or one drug—which "must" be used by our "medical" staff, and which "would not have been available had it not been for the discoveries resulting from vivisection." Thirdly, I would ask how you propose logically to prove what you state as fact.

I feel sure that you, in your strong position, will not fail to

give me the information for which I ask. Thanking you for pointing out the omission,

I remain, dear Sir,
Yours very faithfully,
(Sgd.) GEORGE W. F. ROBBINS,
Secretary.

IV.

From Sir HENRY BURDETT.
The Lodge, Porchester Square, W.
5th August, 1909.

Encl.

DEAR SIR,—I am in receipt of your letter of the 30th ultimo, in which it is stated that the paragraph which you incorrectly quoted was read out to you. It is important to get the facts precisely on record, and I therefore venture to ask who dictated your first letter, so that I may know with whom I am dealing in this correspondence?

The omitted words are not trivial, as you indicate, but important. Possibly you may not have read the whole paragraph in the newspapers, except hurriedly. I observe, too, that you invite me to name drugs, though I said nothing about drugs, as such, in my speech, although the evidence before the Royal Commission and elsewhere shows that much might be said on this point. I may further observe that my concern is, and always has been, to secure the maximum efficiency in the administrative, economical, and general management of every voluntary hospital. This is made clear from the fuller summary of my remarks at the Mansion House, published in THE HOSPITAL of 31st July, 1909, of which I send you a copy.

Believe me,
Yours faithfully,
(Sgd.) HENRY C. BURDETT.

GEO. W. F. ROBBINS, Esq.,
Secretary: National Anti-Vivisection Hospital,
Battersea Park, S.W.

V.

From Mr. ROBBINS.
August 6, 1909.

To Sir HENRY BURDETT, K.C.B.

DEAR SIR,—I am pleased to hear from you again, though we do not seem to be getting on very fast.

You are dealing *with me*.

My first letter was not dictated by anybody.

I did not indicate that the words omitted were "trivial," but in my opinion, they were in this case necessarily implied.

However, we have got all now, have we not?

I take it you acknowledge THE HOSPITAL's account as a correct report of your words. I asked you to name drugs, or a drug, which must be employed in the treatment of disease in this Hospital (your whole speech was on this Hospital), and which at the same time "would not have been available had it not been for the discoveries resulting from vivisection." I only ask for the name of one drug. If you don't want to give it, or cannot, I must do without. If you object to my asking for the name of a drug, "as such," I am quite willing to meet you, and ask you to name a remedy which "the medical profession knows," etc., etc. I don't ask for more than its name in the first place. I then asked you (supposing you give me the name of a drug "as such," or remedy "as such"?) to logically prove, by a syllogism if possible, what you state to be a fact—i.e., that the drug (as such) or remedy (as such) would not "have been available had it not been for discoveries resulting from vivisection." I am not now giving any opinion of my own. I am simply asking you to back your assertion by facts and logical argument. If you name a drug (as such) or remedy (as such), and logically prove what I ask, I will tell you frankly whether it "must be" used and is used here. I shall then proceed to ask you, probably, one other very important question, to which I only hope a clear and satisfactory answer to my above questions may bring us speedily. I confess I doubt it being possible.

Believe me, dear Sir,

Very faithfully yours,
(Sgd.) GEORGE W. F. ROBBINS.

P.S.—I have no doubt as to your desiring the welfare of Hospitals, etc., etc. But let us keep to the point now at issue—your direct assertions and claim.

G. W. F. R.

VI.

From Sir HENRY BURDETT.
The Lodge, Porchester Square, W.
7th August, 1909.

DEAR SIR,—I have your letter of the 6th instant, and note that in the postscript you say: "Let us keep to the point now at issue—your direct assertions and claims." As your letter does not fulfil the conditions embodied in your postscript, and as it is my wish to confine this correspondence to the issue I raised, I set it forth here.

I am reported to have said: I hoped the Authorities of the Anti-Vivisection Hospital, Battersea, would purge themselves of the pretentious humbug involved in the claims they put forward as to the special advantages of treatment in that Hospital from the Anti-vivisectionist point of view, because the medical profession knew perfectly well that in the treatment of disease "they" (i.e., the Battersea Hospital) "must employ remedies which would not have been available had it not been for the discoveries resulting from Vivisection." By that statement I stand, for it is demonstrably true. If this correspondence is to proceed further I must ask you to reply to the following questions:—

1. Is the aseptic system adopted by the medical staff of the Anti-Vivisection Hospital, and are antiseptics used in surgical cases treated there?

2. Are cases of enteric fever and diphtheria admitted for treatment to your Hospital, and do you admit diseases caused by specific micro-organisms?

I may point out in this connection that within the last eighteen months Dr. Wall, when asked: "Do you (the Anti-Vivisection Hospital) test the sputum for tubercle bacilli in cases of doubtful

phthisis?" replied, "Most certainly we do." My statement at the Mansion House expressed the hope that the Authorities of your Institution would "mend their ways, purge their methods, and, in fact, fall into line with all the best administered hospitals in the country." If, as I desire to believe, that is their object, you will tersely reply to the questions I have asked, and so confine this correspondence, as it must be confined as far as I am concerned, to the single issue I raised, as set forth above.

I am, yours faithfully,
(Sgd.) HENRY C. BURDETT.

GEORGE F. ROBBINS, Esq.

VII.

From Mr. ROBBINS.
August 9, 1909.

To Sir HENRY BURDETT, K.C.B.

DEAR SIR,—From your letter I gather that you now desire to name (a) the aseptic system, (b) the use of antiseptics in surgical cases, as remedies (as such) which the Battersea Hospital "must employ," and "which would not have been available had it not been for the discoveries resulting from Vivisection."

It now rests with you, as directly challenged by me to prove this assertion (in inverted commas and underlined above) to be a fact, in the case of each of these remedies: (a) and (b).

That is your own point, chosen from your speech by me, and on which I challenged you, and I await your proof, which is all I ask or care for at present.

Yours very faithfully,
(Sgd.) GEORGE W. F. ROBBINS,
Secretary.

P.S.—Certainly let us keep to this single issue. I have no intention of wandering into opinions, etc. I want the fact, as you claim it, proved.

G. W. F. R.

VIII.

From Sir HENRY BURDETT.
The Lodge, Porchester Square, W.
August 11, 1909.

GEORGE W. F. ROBBINS, Esq.

DEAR SIR,—May I point out that you have not answered the two simple questions I asked you in my last letter. If you are, as your postscript declares, willing to keep to this single issue and want the facts to be proved, you will not delay to send me plain answers to my questions. In any case please understand that, if this correspondence is to proceed further, you must now answer directly questions 1 and 2 of my letter of the 7th inst.

I am, yours faithfully,
(Sgd.) HENRY C. BURDETT.

IX.

From Mr. ROBBINS.
12th August, 1909.

To Sir HENRY BURDETT, K.C.B.

DEAR SIR,—I must decline to help a gentleman in your position to prove a statement made by you, freely reported in many newspapers, and correctly at least (as you assure me, I understand?) in THE HOSPITAL—a copy of which you sent me. To prove your assertion is, I maintain, an impossibility. If your assertion that it is "demonstrably true" is correct, the "onus probandi" rests with you.

The result appears now to be, as I fully anticipated—*nil*. When you have proved that the two remedies named by yourself, i.e. (a) the Aseptic System; (b) the use of Antiseptics in surgical cases—"would not have been available, had it not been for the discoveries resulting from vivisection," we may proceed.

This is a perfectly fair demand, or challenge, and I who make it shall adhere to it. Until you prove your claim I am content to record this as another failure to justify the claims of Vivisectionists.

This letter closes my part of this correspondence, until I receive your attempt at proof, which I hope will be terse.

This would not be the first time that a gentleman has, on a Metropolitan Hospital Sunday Fund platform, made assertions which he could not prove, and for making which he even declined to give his authority.

Believe me, dear Sir,
Yours very faithfully,
(Sgd.) GEORGE W. F. ROBBINS,
Secretary.

I propose to send this correspondence to the press.—G. R.

X.

From Sir HENRY BURDETT.
The Lodge, Porchester Square, W.
August 15, 1909.

DEAR SIR,—The result of our correspondence so far is by no means "*nil*," as you state.

The position you have taken up in refusing to answer two simple questions which the authorities of every reputable Voluntary Hospital throughout the country would have answered without hesitation in course of post leaves your Institution in an invidious position.

In the absence of official information until an authoritative answer is forthcoming to my questions no prudent person of either sex can surely attend your institution as a patient or permit any member of their family to do so.

I need no help of yours to prove my statement, but certain changes at your institution compel me to ask you to state precisely where your Hospital stands to-day in regard to the material matters of treatment covered by my questions.

Yours faithfully,
(Sgd.) HENRY C. BURDETT.

GEORGE W. F. ROBBINS, Esq.

XI.

From Mr. ROBBINS.

National Anti-Vivisection Hospital and Battersea General Hospital,
Battersea Park, S.W.,

August 16, 1909.

MY DEAR SIR,—I am more than surprised at your letter.

I now gather that you were, knowingly, straying from the points at issue (i.e., my challenge of your statement and your ability to prove it), and were asking your "simple questions"—simple enough, I quite allow in themselves—for quite extraneous objects and purposes of your own; for you admit that they were quite unnecessary for your proof. Then, Sir, why ask them in this connection?

I now invite you for the last time—nay, as far as I can, I demand

it—to prove your statement, and to drop all this seeming evasion of a perfectly straightforward and legitimate challenge, which you undoubtedly accepted, and declare you can meet without the assistance which you have asked.

What I declined was, to help you in your, as I regard it, dilemma. After your last letter and your discourteous treatment of this Hospital, no further letter from you will receive attention, unless it contains your attempt at proof—I have not time to give you for any other purpose.

Believe me, dear Sir,

Very faithfully yours,

(Sgd.) GEORGE W. F. ROBBINS,

Secretary.

To Sir HENRY BURDETT, K.C.B.

NEWS AND COMING EVENTS.

THE returns of the Registrar-General show a decline of 1.9 per 1,000 in the birth-rate in the quarter ending June 30, as compared with the average of the same period over the preceding ten years. The death-rate has similarly declined by 1.3 per 1,000.

A UNITED CHARITIES FUND has been created in Sydney to meet the objection raised by the City Council against separate street collections on behalf of individual institutions. These have now combined to collect for the fund in much the same way as the Hospital Saturday Fund, and 1,700 collectors had been engaged in September 1908, to work 107 districts, including the city and suburbs.

THE Metropolitan Ambulances Bill was discussed last week before the Standing Committee A of the House of Commons, and finally ordered to be reported. The Bill, which is presented by Sir W. Collins and influentially backed virtually reproduces the powers sought by the London County Council three years ago, in order to enable them to provide for London such ambulance service as the Departmental Committee's investigations have shown to be required. Then the Council sought powers to establish and maintain an efficient ambulance service for cases of street accident and illness occurring in London. The clauses passed the House of Commons, but did not pass the Lords. The Home Office thereupon appointed a Departmental Committee, which reported that it had been abundantly shown that the present system of dealing with cases of accident and sudden illness occurring in streets and public places within the metropolis was gravely defective, and resulted in much preventable detriment and suffering. The Departmental Committee was divided in opinion as to whether the London County Council or the Metropolitan Asylums Board should be the authority for ambulance purposes in London. In the course of the discussion on the present Bill, Mr. Gladstone, speaking in its support, said the Metropolitan Asylums Board did very excellent work, but to invest it with the whole ambulance work of London would be to give it duties and an authority for which it was not constituted, and, on the whole, for which it was not specially designed. There was not the smallest chance of getting the House of Commons to accept the Asylums Board as the authority, and, if so, to press forward such a proposal would cause dangerous delay. This was a matter of urgency. Something was required to be done, and sooner than shelve the matter indefinitely he hoped this Bill would be accepted. Sir W. Collins mentioned that the whole origin of the County Council's move in this matter was the offer in 1902, or thereabouts, by a well-known philanthropist to present the County Council with an up-to-date automobile ambulance, and the County Council found that they had no power to spend money in maintaining such a service. The cost of maintaining a self-contained station like that at St. Bartholomew's was £1,500 a year, and it was estimated that ten stations would suffice for the County of London.

MR. SYDNEY SCOTT, M.S., F.R.C.S., has been appointed Surgeon for Diseases of the Throat and Ear at the National Hospital for the Paralysed and Epileptic, Queen Square. Mr. Scott, who is Assistant Aural Surgeon at St. Bartholomew's Hospital, was formerly Chief Assistant in the Aural Department at St. Bartholomew's Hospital, and Aural Surgeon to the Evelina Hospital for Children.

AN exhibition of memorials of Darwin was opened on the 16th inst. at the Natural History Museum, South Kensington, and will remain open for some time. The exhibition commemorates the centenary of Darwin's birth and the fiftieth anniversary of the publication of his principal work. The guide-book is written by Dr. W. G. Ridewood, and practically gives the story of Darwin's life. The main object of the exhibition is to illustrate the chief arguments of "The Origin of Species," and much of the material which actually passed through Darwin's hands and the various species which he had in view when he wrote are for the first time brought together for the inspection of the public. Some of the manuscripts shown are particularly interesting.

THE new male hospital pavilion erected in the grounds of Tynemouth Union Workhouse was formally opened in July last. The hospital is situated at the north-west corner of the workhouse premises, and faces Preston Road. It is 184 ft. long, and consists of two floors. There are on the ground floor two wards, the larger one 84 ft. by 24 ft., and the smaller one 48 ft. by 24 ft., with accommodation for twenty-eight beds and sixteen beds respectively, the necessary sanitary arrangements being provided in off-shoots in the centre of each ward. Separating the two wards is a day room, 42 ft. by 16 ft., with large bay windows on either side; two separation wards, each containing two beds, are also provided, together with service room and bathroom. The upper floor is a replica of the ground floor, with the addition of a glass-roofed balcony, with access thereto from the large ward, for the open-air treatment of patients. The total accommodation thus provided is for ninety-six beds. At each end of the building panic staircases have been placed. Large airing courts surround the building, and the sanitary conditions are on the most up-to-date principles. Special attention has been paid to the heating of the building, which is carried out on the hot-water system, by means of radiators, heated by a calorifier in the basement, while in the case of emergency Shorland's "Manchester" stoves, with underground flues, have also been installed. The approximate cost has amounted to £5,900, which works out at about £61 per bed. The building has been erected from the plans and specifications of Mr. Henry Gibson, architect, the contractors being Mr. Jos. F. Newbold, both of North Shields. The sub-contractors were:—Mr. H. Taylor, iron and plumbing work; Messrs. W. W. Ward and Sons, painting and decorating; and Messrs. Dinning and Cooke, hot-water engineers.

THE Lord Provost, magistrates, and town council of the city of Glasgow have granted a site in the West-end (Kelvingrove) Park for the Scottish Exhibition of National History, Art, and Industry, to be held there in 1911. They have also agreed to support the undertaking and to do everything possible to render it a success.

WE are requested to state that copies of the Revised Syllabus of Physical Exercises, issued by the Board of Education for use in elementary schools and in training colleges, to which we refer in an annotation in the present issue, will not be available for public distribution until the third week in September.

It is announced that the King has been pleased to give effect to the representations of the General Council of Medical Education and Registration that it is expedient to confer on the registered practitioners resident in England and Wales the power of returning an additional member to the General Council, but that the addition in question should not be made until the next ensuing general election of direct representatives.

It was recently announced that the Orient Line had granted free first-class tickets between Australia and England to selected scholars of the Australian Universities, and the three first nominations have now been made by the Chancellor of the Sydney University: Messrs. H. J. Swain, Science Research Scholar; S. G. Lusby, Barker Mathematical Scholar; and H. K. Archdale, Woolley Classical and Philosophical Scholar. The three gentlemen selected will travel to England by the Orient Line R.M.S. *Omrah*.

IN a letter to the *Times*, Messrs. Lucas and Murray, of the Hospital for Sick Children, Great Ormond Street, state that the net profits of the Midsummer Fair and Fête on behalf of the hospital amount in round numbers to £2,610, and the donations received for this special occasion to £2,777, making a total sum of £5,387 handed over to the hospital. After receiving this sum the hospital still owes £5,500 to its bankers for money advanced to carry on the necessary work for the current year.

AN important step has been taken by the Local Government Board in the direction of reducing infantile blindness. Orders have just been issued extending the application of the Infectious Disease (Notification) Act, 1889, to the disease known as *ophthalmia neonatorum* in the five pottery towns of Burslem, Stoke-on-Trent, Longton, Newcastle-under-Lyme, and Fenton. The effect of the orders is that this disease is added to the list of diseases compulsorily notifiable under the provisions of the Act. This step has been taken on the application of the local authorities concerned, and the Board is understood to be willing to entertain similar applications from other districts.

AFTER having been the subject of an action in the Probate Division of the High Court, in which action the President, on July 7, pronounced in favour of its validity, the will has now been proved of Mr. Hugh Lewis, of Woodfield House Hill, Sutton Coldfield, Warwick, formerly in business as a pawnbroker at Tipton, Staffs., who died on August 21, 1908, at the age of 76 years. His property is valued for probate at £90,572 10s. gross, of which the net personalty has been sworn at £84,240 2s. 1d. The will is made on a sheet of notepaper, and the testator bequeaths all his property to the Guest Hospital, Dudley. The estate duty on the property will amount to about £7,000, leaving a total gross amount for the hospital of over £80,000. This will have to pay about £8,000 legacy duty, which will reduce the amount available for the hospital to a net sum of between £70,000 and £75,000.

THE death occurred on Wednesday last week of Mr. Sydney George Lushington. Mr. Lushington was a member of the Northern Circuit, and standing counsel to the General Medical Council.

THE eleventh annual conference of the American Hospital Association, now composed of about 700 of the leading hospital officials of the United States and Canada, will be held at Washington, D.C., September 21-24.

PROFESSOR GUIGNARD, Director of the Paris School of Pharmacy, read a report at the last meeting of the Academy of Medicine on researches made by MM. Perrot and Goris concerning the sterilisation of fresh medicinal plants by a scientific method and their uses for making galenicals. The method of sterilisation is based on the destruction of the ferments, and the plants thus treated retain the colour and taste of fresh plants. The dried plants become a raw material which can be used for preparing galenicals at any time of the year. MM. Perrot and Goris claim that they have obtained physiological vegetable extracts comparable in therapeutical action with the fresh plant.

At the City Coroner's Court, Dr. F. J. Waldo inquired as to the death of Annie Bird, aged 25, wife of William Henry Bird, of Liverpool Road, Islington, who died in St. Bartholomew's Hospital on Wednesday in consequence of burns received on Monday. Her clothing caught fire owing to a defective gas ring, and a verdict of accidental death was returned. The coroner, referring to the need of motor ambulances, said that upwards of 14,000 street accidents occurred last year in London alone. The amount of unnecessary suffering must be tremendous, and he had been told by doctors that many deaths would have been prevented if the patients could have been got to hospital with greater celerity.

THE twenty-third annual report of the Holloway Sanatorium at Virginia Water states that last year the daily average of patients and voluntary boarders was 376. The number of cases admitted at reduced rates was 191, of which 27 were received free of charge, a sum of £9,555 being expended in charity in the maintenance of patients at a cost below the actual maintenance rate. The new male infirmary, which cost £6,700, is now in occupation, and has proved a most valuable addition. The total expenditure for 1908 was £59,434 and the income £67,248, leaving a credit balance of £7,813. The average weekly expenditure per patient was £2 11s. The report of the medical superintendent states that the recovery rate was 37.27 per cent., and the death rate 6.84, whilst the average age at death was sixty-two.

THE PURE FOOD CONGRESS.

THE arrangements for the forthcoming Pure Food Congress, which will be held in Paris from October 17 to 24, are rapidly approaching completion. The general correspondent for the United Kingdom is Mr. Loudon M. Douglas, of 3 Lauder Road, Edinburgh. Among the delegates who have been officially appointed are the Hon. J. W. Taverner, Agent-General for Victoria, and the Agents-General for Tasmania and New South Wales; Professor W. R. Smith, representing the Royal Institute of Public Health; Dr. R. R. Tatlock, the Society of Public Analysts; Mr. Richard Robinson, the Department of Sanitary Control in the Borough of Westminster; and Mr. Alfred C. Chapman, Secretary of the Society of Public Analysts of the United Kingdom. In addition to these delegates there will be many others representing scientific societies, medical associations, and firms and companies interested in the various branches of the food industries.

NURSING ADMINISTRATION.

THE HOLT OCKLEY SYSTEM OF NURSING.

I.—NURSES AND PATIENTS.

THE recently published report of the proceedings at the Jubilee Congress of Nursing recalls to mind the only controversial note which arose in the course of the discussions. This discussion arose in regard to the system practised by the Cottage Benefit Association, commonly known as the Holt Ockley system. It may be desirable, in the interests of district nursing, to examine this system a little more closely than was possible during the Liverpool meetings, with a view to forming an opinion on its special features.

The Cottage Benefit Association was founded twenty-seven years ago, and has now 137 branches working on the Holt Ockley system, employing among them 500 nurses. The peculiar features which distinguish these nurses from ordinary village nurses are two in number—very short training, and residence in the cottage of the patient. It is claimed for these two points in the organisation that they make for economy and efficiency; in other words, that they are arranged in the interests of nurses, patients, and subscribers. Branches desirous of securing nurses are invited to send village women to undergo a four months' or a six months' course, at a cost of from £15 to £20, which can, if desired, be paid in yearly instalments.

The nurses are not encouraged to go on to take a course of midwifery, although, in response to the demand for midwives about eight per cent. of the Holt Ockley nurses have now qualified themselves in this respect. The promoters desire it to be understood that the women who receive this preparation for their duties are not qualifying for "assisting at surgical operations, or such surgical cases as could not properly be treated in a labourer's cottage," but this is a distinction easier to enforce on paper than in emergency. The conditions on which the nurses are supplied differ in essential particulars to those usually governing district work. In place of the nurses working from their own quarters and visiting several patients a day, under the Holt Ockley system they reside in the cottages of the sick, and can therefore undertake only one case at a time. They are instructed that their duties consist not merely in attendance in the sick-room, but in taking the place of the mother, should she be the patient, or in assisting her in general household duties should the husband or one of the children be the invalid. She is to cook for the family, clean the cottage, dress and wash the children, and, in fact, act as a charwoman during the time when she is not engaged in the sick-room. It is this part of the system by which the promoters of the Cottage Benefit Association must stand or fall. We have watched many nursing associations begin their career with a minimum qualification for the nurses, and gradually extend the term of training until they were brought into

line with the soundest nursing opinion in the country.

But the important point to consider is whether the resident nurse, prepared to act as charwoman, is a greater benefit in the cottage than the visiting district nurse. This matter is to some extent bound up with the short period of training, for undoubtedly the more thoroughly a nurse is trained the greater the waste involved in employing her outside the sphere of her patient's room. Enquiries into the system lead us to believe that the principle of supplying in one person a nurse for the patient and a charwoman for the cottage is essentially unsound; unfair to the nurses, however imperfectly equipped they may be for their nursing duties, and both unnecessary and inconvenient to the patients. For the nurses the inconveniences lie on the surface. The accommodation available for them is always poor, and sometimes very bad indeed. No cottages in rural England are intended for the accommodation of a resident nurse, and the privacy, cleanliness, and quiet to which the nurse is entitled when off duty are impossible of attainment in even the better class of cottage. The hardships endured by the Holt Ockley nurses in the worse kind of cottage are better imagined than described. No nurse who is worth her salt ever grumbles at the task of reducing her patient's surroundings to order, however bad she may find them; but she is entitled to her bath and to a peaceful night's repose in pure air after the day is done, luxuries practically unattainable in the ordinary cottage. Again, the rule that the patient provides the nurse's food during the duration of the case presses very hardly on the nurse. Often the food which is procurable is quite unsuited to the nurse's requirements; often the nurse shrinks from adding to the expenses of her patient and satisfies herself on potatoes and bread. Gastric troubles are in consequence not infrequent, though the hardships endured by the nurses seldom come to light, and can only be guessed at from the fact that they seldom continue this line of work after the completion of their contract. It is doubtful whether, from the patient's point of view, the resident cottage nurse is an unmixed boon. Not every woman while upstairs is pleased at the thought of a stranger assuming her duties, taking meals with her husband, and doing everything a little better than she can do it herself. The process of child-bearing is associated in all classes of women with causeless outbreaks of jealousy, and there are certainly inconveniences to balance the admittedly good services rendered by the nurses. It is highly creditable both to these women, with their short period of training, and to those responsible for teaching them, that complaints are infrequent. The system may be said to work at its best in districts where the patients are principally drawn from the class of gentlemen's servants, and the cottages are of the comfortable order.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, AUGUST 30
to SEPTEMBER 4.

THE POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

At 10 a.m.

August 30 and September 2, Surgical Registrar,
Demonstration.

September 3, Medical Registrar, Demonstration.

At 12 noon.

August 30, Dr. Bernstein, Pathological Demonstration.

At 12.15 p.m.

August 31, Dr. Pritchard, Practical Medicine.

September 1, Dr. Grainger Stewart, Practical Medicine.

At 5 p.m.

August 31, Dr. Robinson, Gynæcological.

September 2, Mr. Bidwell, Perforation of Gastric and
Duodenal Ulcers.

PROPOSED JEWISH HOSPITAL FOR LONDON.

A MEETING in support of the proposal to establish a Jewish hospital in London was held on the 15th inst. at the Pavilion Theatre, Whitechapel, and was largely attended. Dr. A. Gaster, who presided, said he deplored the absence of a Jewish hospital in London, and he could not understand how the Jewish community could exist without such an institution. A sum of £1,700 had been collected towards the object they had in view, and it was a question for them to decide whether they were going to relinquish the scheme because disapproval had been expressed of it. It was further stated at the meeting that a site for the hospital had been provisionally secured at Stepney Green, but before paying a deposit it was intended to hold a conference of the Jewish communities. The extent of the area to be acquired was 22,000 feet, and it had been suggested that if Jewish residents in London would subscribe 10s. per foot, £11,000 might be raised towards the cost of the hospital. If half of the 120,000 Jews resident in East London contributed only 1d. per week it would bring in £250 weekly. Application had been made to the richer members of their community, but no definite answer had been received. A resolution approving of the establishment of the hospital was adopted.

LITERARY NOTES.

THE Francis Galton Laboratory of the University of London has published the second issue (Part III.) of "The Treasury of Human Inheritance." Among the fresh features are articles on Insanity by Dr. Urquhart, and on Hermaphroditism by Dr. Bullock.

A CORRESPONDENT has taken us to task for our recent assertion that English medical journalism is better of its kind than English medical literature. He writes: "I enclose three journals for your inspection. All relate to the same special subject, but one belongs to this country, the second to France, while the third is German. I think any judge of the question would agree that the only point in which our representative surpasses the others is in the number and variety of the advertisement pages. On the other hand, both foreign journals give long lists of recent publications in several languages bearing on the subject in question, while the English one does not. The strongly popular tone of the latter, too, and the curtailing of its scientific articles, make it appear beside the others something like a parish magazine." We would recommend to our correspondent comparison of the leading medical weeklies in this country and on the Continent, whence it will appear that the British medical editor's labours in the way of collecting and presenting information on current questions stand easily first.

MESSRS. J. AND A. CHURCHILL are about to publish the following new books on medicine and science: "A Text Book of Nervous Diseases." By W. Aldren Turner, M.D., Physician and Lecturer on Neurology, King's College Hospital, and T. Grainger Stewart, M.B., Assistant Physician National Hospital for Paralysis and Epilepsy. This work will cover the whole range of nervous disorders and their treatment, and will be profusely and originally illustrated.—"A Text Book of Experimental Physiology." By N. H. Alcock, M.D., and F. O'Brien Ellison, M.D., St. Mary's Hospital Medical School. With an introduction by E. H. Starling, F.R.S., Jodrell Professor of Physiology University of London. This book, which will be a small one, is designed to meet the need felt for a small handbook on the subject. It will contain thirty-six illustrations.—"A Course of Practical Chemistry," for Use in Public Schools. By A. Beresford Ryley, Science Master Malvern College.—"Sight Testing Made Easy." By W. W. Hardwicke, M.D. This small work will be illustrated with diagrams elucidating the text.—"A Guide to the Paris Medical School." Second Edition. By A. A. Warden, M.D., Physician to Hertford British Hospital, Paris.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For GOUT and RHEUMATISM.

Professor Immermann, Basle, Professor of Internal Medicine at the University:—

"Hunyadi János has invariably shown itself an effectual and reliable Aperient, which I recommend to the exclusion of all others. Never gives rise to undesirable symptoms even if used continuously for years."

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

The Hospital

A JOURNAL OF

The Medical Sciences and Hospital Administration.

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SATURDAY, SEPTEMBER 4, 1909.

EDUCATIONAL NUMBER.

THE OBJECTS AND METHODS OF MEDICAL EDUCATION.

It is easy to define in general terms the objects of medical education at the present day. They are, of course, to turn out a class of cultured gentlemen, as well qualified to prevent and cure diseases as the knowledge of the times makes it possible for them to be. The proposition, it will be admitted, is beautifully large and vague, and there is some reason to fear that the methods at present in vogue are, if anything, vaguer than the proposition. It is not therefore inappropriate, especially at this season, when a new generation of medical scholars is about to take up its task, to formulate more precisely the ideals at which medical education should be aimed, with a view to permitting a comparison between what we have and what we ought to wish for.

It is a premiss of vital moment that any scheme of education designed for a class, and not for an individual, should be drawn to the scale of an average intellectual capacity. Otherwise idealism is purchased at the expense of practicability; and, though the products of such a scheme may include here and there a practitioner of phenomenal brilliancy, the general average will be low; since the commonplace individual, finding himself incapable of digesting the over-ample intellectual fare presented to him, is likely to give up the unequal struggle and sink into sloth or despondency. We will assume therefore that the function of a scheme of medical education is to produce general practitioners in the highest possible state of professional efficiency, a condition involving far more than the possession of mere technical knowledge in abundance. The ambitious man, and he who evinces a leaning in some special direction, may safely be left to their own devices once they have received the training necessary to equip them as high-class general practitioners. It is with the average that we are concerned, and our object is to make the average high, not by virtue of an isolated marvel or two, but by virtue of a general levelling-up.

Admitting this, we must at once dismiss from our minds all hope of making the practitioner of the future an encyclopædia of science. This has been attempted in the past, and not unnaturally. There is hardly a branch of natural science with which Medicine, in the large sense, does not at some point come into touch, and it is not unreasonable to affirm that the more comprehensive the horizon of science commanded by a doctor, the more balanced, sane, and perspicacious will be his judgment of the par-

ticular problems he must encounter in his daily practice. But the hope is not tenable. The body is a chemical factory unapproached in the intricacy of its operations; there is not a function of it which does not involve a chemical interchange, and it is probable that there is not a distemper of it, excepting mechanical injury, which is not based on a similar foundation. Therefore, one might argue with some show of reason, the prime essential of medical education is chemistry, including of course bio-chemistry. Yet the proposition has only to be thus baldly stated for the fallacy of it to become apparent. The fact is that there is scarcely a branch of knowledge, which may not on occasion be directly useful to a doctor. But since art is long and life short, what the novice requires is that a rigid selection should be made for him of those items, and those alone, which are intimately related to medical efficiency.

There is no better way of arriving at the proper direction of medical education than to analyse the generic qualities and characteristics of general practitioners who have proved themselves successful. For, putting aside the rare instances in which success has been won by unblushing effrontery and unrestrained abuse of truth, it is correct to say that no man succeeds in general practice who has not the capacity to benefit his patients; and he who fails in this has failed to justify his professional existence, be his academic merits what they may. Now it is a matter of common experience that academic merit and professional success do not by any means necessarily go hand in hand. Many a man whose technical knowledge is minimal achieves pronounced success because what we may call his technical wisdom is great; while, conversely, everyone is acquainted with doctors whose high technical knowledge does not protect them from relative failure. We are driven then to the conclusion that technical knowledge is not the end-all of medical education, and we may spare a moment to inquire somewhat into the essence of this technical wisdom.

Technical knowledge—knowledge of a craft—implies an acquaintance with the instruments of a craft; but technical wisdom as we wish it to be understood implies a faculty of judgment as to the proper instrument to be used in any particular conjunction of circumstances. In the case of a handicraft, such as carpentering, technical knowledge and technical wisdom are not likely to be far divorced, since the material to be worked upon has but limited

attributes, and these well-ascertained and constant, while the relation between the instrument to be used and the purpose to be achieved can be reduced to a simple rule. But the doctor's material—namely, human nature, is unstable in the last degree. Not only does every individual react differently from his neighbours to a given stimulus, but the individual's reaction to an identical stimulus is capable of variation from day to day. Moreover, there is no simple rule by which a doctor may know which of the many instruments of his trade is the suitable one for any given case. For example: A patient presents the symptoms of gastric dyspepsia. Now technical knowledge tells the doctor that these symptoms may be combated by bismuth, or bitters, or aperients, or gastro-enterostomy, or dieting; but only technical wisdom will lead him to perceive that the root of the whole mischief is anxiety, and that the proper instrument to be used is not a drug, nor a knife, but comfortable conversation and consoling advice.

It seems then that above all things a medical student must be taught to develop acuity and breadth of mental vision, and a faculty for analysing human nature, in order that he may be prepared to detect, and meet, latent characteristics knowledge of which is vital to his success in treatment, but of which humanity in general, and particularly ailing humanity, is often profoundly secretive. In other words he must be taught to cultivate tact, the quality which enables a man to peer into his neighbour's mind, to measure his temperament, to anticipate the effect of events upon that temperament, even to reconstruct from observed effects the causes which have been operative in their production, and finally to bring to bear the curative measures, whether material or immaterial or both, which his technical wisdom pronounces to be most appropriate. It may be urged firstly that this is not medical education, and secondly that it cannot be taught. The answer is that what appears to be the prime factor of success in a profession can hardly be considered foreign to the schedule of instruction in that profession. As to the second point, it is true that to some people the exercise of tact is natural, while others are incapable of compassing it—much as some folks of average intelligence are incapable of assimilating the most elementary notions of mathematics. Nevertheless there is little doubt that, were the matter insisted upon by teachers in the schools, students would go out into the world with a much juster appreciation of the curative virtues of human-kindness. We do not wish to imply that our teachers (or students for that matter) are actively harsh. Far from it. But they are not as a rule actively sympathetic. Pre-occupied with the scientific, they either neglect, or at least do not emphasise, the human side of medicine, an appreciation of which forms the chief therapeutic agent of many a successful general practitioner.

But although we have insisted with so much urgency upon the non-material aspect of medical education, we recognise well enough that no exercise of tact or penetration will control a post-partum hæmorrhage, relieve intestinal obstruction, or restore a failing heart. It is with the provision of such knowledge that medical

education, on its medical, as opposed to its merely scientific, side, has up to the present exclusively concerned itself; and, though we have advanced reasons for supposing that this monopoly of attention is not deserved, the subject is of immense importance. The problem here, though simpler than the other in that it is more defined, is yet an enormous one. It is to provide a man, within a period of five years, with sufficient technical knowledge to make him an efficient physician, surgeon and obstetrician. Now these are immense subjects, and there are certain others so intimately related with them as to form almost a part of them—namely, Anatomy, Physiology, Bacteriology, and Pathology. No amount of pruning can legitimately reduce this list; but there is quite a number of subjects, certainly cognate to medicine in some particulars, yet sufficiently remote to make them relatively undeserving. These are the subjects upon which it is usual to spend the first two years of the medical curriculum—namely, Biology, Physics, Chemistry, and Botany. There is a considerable body of opinion that these subjects are not entitled to a place in the strictly medical curriculum. Not that they are unimportant (since knowledge of them, especially of physics and chemistry, is often of notable service to the practitioner), but because in the first place there are matters of higher moment which call for attention, and in the second that the amount of time at present devoted to these subjects is insufficient to give the student more than a smattering of them, a knowledge too superficial to be turned to good account. Even with regard to Pathology (which is, in practice, to a large extent synonymous with Morbid Anatomy), there is room for doubt whether the tendency of the times is not to make too much of it; for long familiarity with the morbid anatomy of diseases which have proved fatal tends to produce a pessimistic attitude in a doctor, an attitude pernicious both to himself and his patients, and not justified by the generality of medical experience. In brief, then, we may say that the studies of a medical student during the five years of his curriculum should be limited to those immediately concerned with the prevention or cure of disease. The present preliminary subjects should be made truly preliminary to the study of medicine, instead of trespassers. They are subjects eminently fitted to be learnt during the later years of school life, while five years is none too long to master what is required of the efficient practitioner. The first desideratum for the person who is to spend his life in dealing with sick people is the study of sick people under the direction of experienced teachers, and the whole of the curriculum should be devoted to it. Should such a scheme become operative we should not, as we do at present, see large and vastly important branches of disease, such as the specific infectious fevers and insanity, cavalierly dealt with in a dozen or a score of flying visits, snatched at the expense of other studies. The great requirements of medical education on its material side are that it should be as far as possible clinical, and that those who order it should allot to each of its elements time strictly proportional to the value of that element in building up an efficient physician.

"CONCENTRATION" AND THE FUTURE OF MEDICAL EDUCATION IN LONDON.

NOTWITHSTANDING the fact that the clinical field offered by the hospitals of the metropolis is still unrivalled, the pre-eminence of its teachers undoubted, it is nevertheless true that more than half the medical schools of London are in financial difficulties. At one time the post of lecturer in a medical school was sufficiently lucrative to make it sought after for its own sake. Nowadays, far from being lucrative, in many of the schools the lecturers are unpaid and the indirect advantages so uncertain that the duties are undertaken only with reluctance and are felt as a burden. The causes of the critical condition of the schools are evident enough. The effects are felt most hardly by the smaller institutions, but are by no means confined to them. The state of things now hurrying to a head was foreseen many years ago, and is the natural outcome of the changed conditions of medical education. For the most part the schools developed out of the system in vogue a hundred years ago of attaching "cubs" or "pups" to individual members of hospital staffs who imparted instruction in every branch of knowledge judged by them necessary to the education of a doctor. With the increasing number, diversity, and complexity of studies impressed upon a student, it soon became necessary to apportion the teaching of different subjects to special teachers, who, however, were still almost exclusively members of the medical staffs. In time, for the whole of the ancillary subjects, it became necessary that the teachers should be men devoted entirely or almost entirely each to his own subject, and so soon as this crystallised, the expenses of a student's education became enormously increased because a body of men was employed whose whole living—however inadequate—had to be made out of teaching. Once this state of things was reached it was obvious that the idea of trying to maintain eleven different sets of teachers in metropolitan schools of medicine, at a time when a great many schools of pure and applied science had sprung up, at a time too when the number of students entering the profession was falling off and when the number of those coming to London was diminishing out of proportion even to this decrease, was unsound economy. Lord Cowper's Commission of 1892, the Statutory Commission of 1898, and Lord Selborne's of 1899 all recognised the fundamental insecurity of the position, and one and all recommended as a way out of the *impasse* the idea of "concentration" among the schools, at any rate for the teaching of the preliminary subjects.

The growth of the provincial schools of medicine, many of them the nuclei of the provincial universities, supported to some extent by State grants and not a few of them endowed by private benefactions has greatly increased the difficulties of the metropolitan problem. Chairs in the provincial schools are so much better endowed than those even in the best-paid London posts that teachers are regularly attracted from London.

Conditions as to space both for buildings and for recreation grounds are so infinitely superior in the great provincial cities that subsidiary attractions alone are sufficient to attract many students thither, who in years past would certainly have come to London, and who even now come in large numbers to London for their examinations. The University of London is unique in permitting its degrees to be taken by students who have never spent a day within the walls of any one of its schools.

Another very serious disadvantage of medical education in London is the difficulty presented by the early examinations of the University; or rather, the unsuitability of the earliest examination to the education provided in the schools from which most of the students are drawn. The majority of students educated in the schools of the London University never get the degree. It is not because they do not pass a qualifying examination of the same standard. It is very generally acknowledged that the practical clinical work of the final Conjoint examination is little, if any, inferior to that of the M.B., B.S. London, and we believe that in some respects it surpasses the latter examination. And certainly the standard will compare well with that of the provincial degree examinations. So that the London man is left without any claim to that title of "Doctor" which has so large a commercial value, erroneous though the popular idea of its value may be.

There is some slight hope that this difficulty—this anomaly—may be removed by the legislation following on the report of the present Commission on University Education in London, but it is to be feared that it will only be accomplished by drastic means, and it is not beyond the bounds of possibility that before it comes, simplification will have been attained by the decrease from inanition of some of the warring factors of opposition.

There remains just the chance that the traditions of Medical Education in London may be completely preserved and even afforded greater scope than at any time in the history of the metropolitan schools. We have got the material, we have got the teachers, and we believe we can get back the men if it should be found possible to sink jealousies, to bury suspicions and boldly to concentrate. The experiment to this end made by three of the smaller schools has worked without catastrophe, and to their mutual satisfaction, so far as we are aware, for five years, a fact that should encourage others in a similar course.

If for a moment we may be permitted to picture what would be the outcome of a greater degree of concentration; if for example three or four schools would share the expenses of advertisement, share the expenses of providing everything in the way of the indispensable sporting attractions for their men, what economies of time, energy, and money might they not effect at the same time? What a stimulating effect it would

have upon the teaching staff if it were known that the students had choice of several hospitals for their clinical instruction! What a good effect upon the students if it were known that the clinical appointments and resident posts were open to competition among the whole of the students of the three or four or five hospitals. What a saving in the energies of lecturers might eventually be secured! What is the difficulty in the way of all this? It probably lies in the fact that the only reward a member of the staff of a London hospital can look for is in the practice he acquires as a consultant to his old pupils. Year by year the work required of him in hospitals has become heavier and heavier; year by year he has turned out men better and better educated, less and less in need of consulting opinion; he is killing by slow starvation the goose that laid his golden eggs, so that to-day it is much harder to make a living than it was twenty or even ten years ago. The gain or loss of students then may be to the members of a hospital staff the saving or loss of their very existence, and it is not to be wondered at that they view radical changes with distrust.

There are many other features that make the problem of medical education difficult. Many factors are contributing to diminish the amount of clinical material, or at least to decentralise it. The medical student of to-day must pursue his fever cases into the suburbs, his cases of mental disease into the country; soon he may be required to look for tuberculosis in special clinics, and special departments of his study in hospitals devoted to small branches of practice. It will not make for his "education" that his instruction should be imparted in fragments. But these difficulties are due to high considerations of public safety, and so long as the growing tendency to municipalisation of con-

trol in matters of health and disease is not accompanied by want of consideration for the needs of medical education, no complaint can be made. It is a most significant fact, and one hardly to be appreciated by the public, that, in spite of a cloud of difficulties, London schools—and not alone the great ones—continue to turn out men whose education is not surpassed anywhere in the kingdom; men whose practical knowledge is greater even by reason of the greater individual attention their smaller numbers have enabled them to obtain; and, needless to say, men imbued with the spirit of the best traditions of long generations of great physicians.

One further result of the diminution in the numbers of elementary students has been the development in almost all the London schools of opportunities for the pursuit of post-graduate instruction. More than any other form is this teaching destructive of the sources of income of the teachers, but it is, of course, greatly to the interests of the public that their medical attendants should attain the highest possible skill in every branch of their work, and should be able to revise and renew their knowledge from time to time throughout the period of their lifework. "The greater part of the higher education in England is eleemosynary," has said Sir Edward Fry, and he meant by that "endowed." With the most insignificant exceptions, this is not true of medical education so far as "endowment" is concerned in London; on the other hand, it is increasingly true every year so far as the fact goes that the reward of the great majority of the teaching in London is not only not paid directly, or very inadequately paid, but paid more and more problematically by nebulous indirect means. In London the instruction and inspiration of the future practitioners is a free gift from the teacher to the public. So far the public has shown but very slight recognition of it, and still less encouragement.

THE LIMITATIONS OF HOSPITAL TRAINING.

So numerous have the sub-divisions and specialties of medicine and surgery evolved during the past generation become that it is no matter of surprise if students are sometimes a little confused during their period of study in the wards as to the exact purpose of their education and the proper proportions of certain of its component parts. While human nature remains the same, medical student nature will infallibly place first and foremost the passing of examinations; and if everything were arranged for the best in an ideal medical commonwealth such an ambition would be not only, as indeed it now is, praiseworthy, but also of the highest ultimate advantage to everyone. That is, if examinations, especially final examinations, were so arranged as to form complete tests of a man's fitness and all-round ability to enter general practice, then obviously the kind of study which best prepared him for examination would be the kind of study which should best fit him for private practice. But such a state of affairs is, in fact, extremely difficult to encompass; indeed it may be doubted whether by any examination

system it ever can be brought about completely, though certainly some of the examining corporations might attempt rather more successfully than they at present do to approach towards it. Probably even the State regulation of medical qualifying examinations would fail to secure an absolutely satisfactory result in this respect.

The fact remains that in several respects final examinations as at present conducted are unsatisfactory tests of a student's fitness for private general practice; and since nine-tenths of those who enter for the qualifying examinations are destined for practice, either at home or abroad, to which the word general can rightly be applied, it may be well to consider how far the individual can rectify such a defect in his educational curriculum. To a certain extent conscious volitional effort is not of very much use. That is to say, tact, sympathy, adaptability, resource, and other somewhat vague qualities which make for success in professional life are not to be bestowed by any system of inculcation: they come naturally to some men, not at all to others, but they can be partially, at least, culti-

vated by keen observation. The medical student who is fortunate enough to be dresser or clerk to a hospital resident who is both devoted to his work and naturally adapted to it may learn the most valuable lessons by watching the ways in which his senior extracts information from patients, or from garrulous friends, with the maximum result and the minimum of friction and waste of time; in which he handles anxious mothers and bereaved relatives; in which he controls and yet conciliates the sisters, nurses, porters, office clerks, and other units of the hospital comity with whom he is hourly brought in contact; and in which he manages to gain the confidence and friendship of his "chief" by loyal support and intelligent prevision. House surgeons have been known who have been somewhat chaffed by their contemporaries for a supposed exaggeration of politeness in investigating the complaints of charwomen or chimney sweeps; yet even a hospital out-patient or casualty room is by no means an impossible school for the cultivation of what is called a good bedside manner; and a little extra good humour or consideration is by no means thrown away even upon the most unpromising looking of the pauper classes.

Here then is one link in the chain of professional efficiency which is never tested by examinations, and therefore often neglected by students; yet it is a link whose weakness will ruin the whole chain of carefully tested proficiency in the scientific and clinical parts of medicine. To teach these things is doubtless impossible, and for that matter not every teacher is competently outfitted himself with the qualities that make for success in general practice. A well-known London surgeon, now retired, was fond of impressing upon his dressers the aphorism "You gentlemen must remember that you will be examined by the rejected of our profession," and if this gibe contains neither the whole truth nor yet nothing but the truth, there is just enough of truth in it to make it sting. In the same way it is to a certain extent the case that those of the teachers at medical schools who are most successful in consulting practice have least time to devote to teaching students. Thus it comes to pass that, broadly speaking, the teachers are either young men whose reputation as clinicians is still in the making, or men to whom the scientific and tutorial sides of their work appeal more than the strictly utilitarian. In either case it follows that the medical student's natural inclination to study only that which will conduce directly to his success in passing examinations is somewhat apt to be encouraged at the expense of those indefinable qualities which are less marketable in an examination hall than in after life.

Then, again, since hospitals are staffed more and more by specialists, the student becomes accustomed to seeing the patients, in whose symptoms and signs he is instructed, already pigeon-holed for him into compartments. He goes into one room in an out-patient department and finds an assistant surgeon discoursing upon a series of cases all surgical in nature; or into another to find a physician dealing solely with diseases of the skin, let us say. What may easily escape his notice is that receiving-room officers or some other competent qualified func-

tionaries have already briefly investigated these patients and assorted them, removing from the motley assemblage both those whose immediate admission seems imperative and those whose complaints are too trivial to demand regular out-patient attendance. In practice there is no such classification; cases medical, surgical, obstetrical, ophthalmological, and of many other kinds, arise haphazard, and the practitioner has to be prepared to deal with them all. To a very considerable degree the modern practitioner has to be a bit of a specialist in everything. It is true that this has always been his *rôle*, but then a couple of generations ago the conditions were hardly comparable to those that now exist.

It may be asked, how in the world can the medical student in the two years allotted to his clinical studies make himself adept in a dozen or so of specialties, besides receiving his general training and acquiring the knowledge necessary to pass his examinations? And the answer is that, very exceptional men alone excluded, he cannot do so. That this is so is not the fault of his hospital, nor of his teachers; it is a limitation caused by the inadequate period allotted to clinical studies. There is general agreement as to the method by which this limitation of hospital training may best be overcome, but unfortunately there are financial and other practical considerations which only too often prevent its realisation. The method in question is to obtain a resident hospital appointment as house surgeon, house physician, or some equivalent post. In such an office the apt and the observant will learn more of the practical application of the principles of medicine and surgery in a month than they have done in two years, or even three or four, of unqualified study. For this purpose a thorough training in the groundwork of medical education is necessary, but he who has acquired this as it is intended by licensing bodies that it should be acquired, as opposed to him who has been "crammed" through by an over-zealous "coach," will rapidly acquire a familiarity with the various sub-divisions and special departments which makes him in a year or two really a capable man in every or nearly every department of modern therapeutics.

Now this method of completing a medical education is, in a sense, an expensive one. That is, it involves the expenditure of a year or more of time in return for a salary which is often nothing at all and always very far short of the market value of the services rendered by the house officer to his hospital. Whether this state of things should or should not be rectified by the encouragement of a spirit of trades unionism among young medical men we shall not now discuss, but parents and guardians who are about to face the cost of bringing up a boy in the medical profession ought to know that after and beyond the (minimum) five years of unqualified study there comes a period during which, if he is to be fully equipped, his work will be quite unremunerative, if not actually an item of expense. A fair day's wage for a fair day's work is a principle not yet adopted in the medical profession, though signs are not wanting which indicate the possibility of its recognition, more fully than at present, in the course of a few years.

THE SCIENTIFIC ASPECTS OF THE MEDICAL CURRICULUM.

A FAMOUS French physicist has said that each generation laughs at the generalisations of the preceding one. If this hold good in the lofty domain of pure science, there is every excuse for frequent rectification of tradition in medicine, and therefore in the preparation for a medical career. Medicine has been loosely described as applied science. This description, impossible fifty years ago, and even now distinctly meagre, will never come to be a definition. Still, there are certainly many truths in biology, physics, botany, and physiology which the student of medicine must grasp firmly in order to obtain a foundation for his later and more strictly professional knowledge—a consequence, or rather, one of the many consequences, of the march of science during the latter decades of the nineteenth century of which the general educated public is not yet aware. The prevalent idea as to medical students' studies is still the old "walking the hospitals"; and many people are surprised if, after two years at a medical school, a friend or relative has not some little practical knowledge of his art—cannot, for instance, tell them what is good for a gumboil. They think, to put it colloquially, that in two years he should surely have got as far as gumboils; whereas the attention of the unfortunate individual in question may have been devoted pretty exclusively during the whole of that time to such things as test-tubes and the internal arrangements of the earthworm. The foundation of modern physiology by Johannes Müller, with Schwann's enunciation of the cell theory, and Virchow's revelation of its bearing on the processes of disease, soon made scientific training and study necessary preliminaries to the learning of rational therapeutics. Then Pasteur discovered the microbe, and, in their various departments and degrees, Koch, Ehrlich, Laveran, and (to be patriotic for once) Lister and Wright, established by scientific experiment new views on every point in medicine. To repeat some of the simpler and most practically significant of these experiments for himself, much as a schoolboy may those of Faraday, is part of every medical student's curriculum nowadays; and hence the purely clinical period—the period for the examination of gumboils—tends to be still further deferred.

Current prospectuses of the various schools of medicine throughout the country accordingly show the subjects of medicine and surgery proper to come rather late on the schedule of instruction, and moreover to comprise courses in morbid anatomy and bacteriology. When taking out these courses the student resumes in a great measure his earlier line of work, work in which the microscope plays a large part and to a less extent also the apparatus of the chemical laboratory. Natural aptitude for the use of these instruments consists in the possession of what is familiarly known as "technique," *i.e.* neat-handedness and orderly method in small mechanical procedures, together with patience and tenacity. The boy who is fond of photography will find himself at home in a laboratory; but "technique," although of the greatest use to a medical

student, does not always go along with high mental capacity. Quite clearly it is to some extent within the power of every shop assistant who can do up a parcel neatly, while, if the photographer's fingers are to be valued against the philosopher's brain, there is no doubt as to what the verdict will be. But medical microscopy is generally described as interesting to the average person, and a relief from the rather heavy reading necessary in latter-day medicine, where facts have outgrown the scope of oral instruction, and must perforce be sought for in textbooks which increase steadily in bulk every two or three years.

To obtain desired laboratory reactions with constancy, too, is a small test of honesty, practical ability, and perseverance—all qualities needful to the good clinician. A parent should, however, never look upon a brilliant academic career in scientific medicine as a guarantee of his son's future scientific eminence, although it is certainly of much immediate advantage. Originality and imagination, the essential attributes of the real investigator, are different matters altogether. As a rule, great advances are achieved by simple methods, their provision being the sole indispensable antecedent. Lord Kelvin's class demonstrations generally went wrong; in fact, he was far from being a good practical experimentalist. Faraday "divined the truth" with inferior apparatus. Koch's method of identification of the tubercle bacillus was by no means a complicated process; before him, Ehrlich for one had made the note to see what was the true nature of the little red rods in the microscope field. Nevertheless, in this country at any rate, small allowance is made, in any form of instruction, for originality, and the man well thought of is the one who has come successfully through the academic mill.

Judged by the hard and almost fatal test of what of value in after life remains to the educatee, no doubt medical academic instruction, being highly technical, compares favourably enough with the other kinds. But still expertness, the result of laboratory training, is perhaps rated too highly, and the inspiring influence of a real scientific enthusiast upon kindred souls, though often mentioned, is yet under-valued. Unfortunately, too, it happens only too frequently that those whose qualifications, assessed by the examination test, stand highest, yet lack some essential element of the first-class clinical worker, without which no amount of book-learning is of any value. There can hardly be a medical school in the kingdom in which it is not possible to single out one surgeon at least whose academic distinctions stand as high as his surgical performances are the reverse; and whose position, gained as a young man, could be better filled by many of those whom, as students, he seemed easily to out-distance. The history of medical discovery makes it safe to predict that the problems of cancer or of leprosy will be solved, not by deputies and recorders, but by minds which, in Hazlitt's fine phrase, can "invent according to nature," and thereby command success upon their own conditions.

THE MEDICAL CURRICULUM.

QUALIFICATION AND REGISTRATION.

The first thing a medical student has to do is to register himself as such, because the five years of study which are necessary in order to obtain a qualification are dated from the time of registration. For this purpose application must be made to the Registrar of the General Medical Council, 299 Oxford Street, London, W.

The student, however, cannot be registered until he has (1) passed a preliminary examination in Arts which is recognised by the General Medical Council, and (2) has commenced medical study.

A complete list of the recognised preliminary examinations may be obtained on application to the Registrar of the General Medical Council; and it is essential in any case to discover at a sufficiently early period what preliminary examinations are recognised by the particular examining body that it is proposed to work under. For example, with few exceptions, the London Matriculation is the only preliminary examination which will permit a candidate to proceed to the higher examinations in order to become a graduate of the University of London.

Wherever he proposes to study, and whatever qualification he intends to get, the courses of study which a medical student has to undergo are really very much the same; they may be divided, generally speaking, into the two groups of the preliminary and the clinical. But it is not, as a rule, compulsory to undergo the necessary courses of instruction in these two divisions of medical education at the same school. Often a student will be well advised to undergo his preliminary training at a provincial school, or as a student of the University of London, and to pursue his clinical studies elsewhere, as in one of the large Metropolitan hospitals.

The following is a list of the examining bodies, and the degrees and diplomas granted by them which admit the graduate or diplomate to enter his name in the register of legally qualified medical men:—

THE ENGLISH CONJOINT COURSE.

THE student who is desirous of taking the Conjoint qualification—that is to say, the double diploma of Member of the Royal College of Surgeons of England and Licentiate of the Royal College of Physicians of London—has to comply with the regulations laid down for medical qualifications generally. When registered as a medical student he has to show that he has attended lectures and practical work in chemistry and biology before he is allowed to proceed to either the first or the second part of his “first.” If he wishes to take the third part at the same time he has to show proof that he has been properly instructed in practical pharmacy by a recognised chemist or registered practitioner. The subjects for the first examination are chemistry and chemical physics, biology, and pharmacy. In the first part the examination is partly written and partly practical; in the second and third parts it is wholly oral. The practical part consists of simple quantitative and qualitative analysis, and candidates usually find the test a comparatively easy one. Assuming that the student has had some preliminary training, such as can usually be obtained at the general schools from which he passes his preliminary, he ought not to take a longer time than six months to pass the first and second parts of the “first.” Many students take both parts after only three months’ work.

ENGLAND.

EXAMINING BODY.	QUALIFICATION.
University of Oxford ...	M.B., B.Ch. (Only obtainable after graduating in Arts.)
University of Cambridge ...	M.B., B.C.
University of London ...	M.B.
University of Durham ...	M.B.
University of Birmingham...	M.B., B.Ch.
University of Liverpool ...	M.B., Ch.B.
Victoria University of Manchester ...	M.B., Ch.B.
University of Leeds ...	M.B.
University of Sheffield ...	M.B., Ch.B.
Conjoint Examining Board in England ...	M.R.C.S., L.R.C.P.
Society of Apothecaries of London ...	L.M.S.S.A.

SCOTLAND.

University of Edinburgh ...	M.B., Ch.B.
University of Glasgow ...	M.B., Ch.B.
University of Aberdeen ...	M.B., Ch.B.
University of St. Andrews...	M.B., Ch.B.
Conjoint Examining Board in Scotland ...	L.R.C.S. Edin. L.R.C.P. Edin., and L.F.P.S. Glas.

IRELAND.

University of Dublin ...	M.B., B.Ch., B.A.O. (Only conferred on graduates in Arts.)
Royal University of Ireland ...	M.B., B.Ch.
Conjoint Examining Board in Ireland ...	L.R.C.P.I., L.R.C.S.I.
Apothecaries’ Hall of Ireland	L.A.H.Dub.

Many of these examining bodies lay down certain restrictions as to residence, and it is therefore important that an intending candidate should learn what these restrictions are by applying to the examining body from which he wishes to obtain his qualification.

The biology required for the first examination is exceedingly elementary. The examination is entirely oral, lasting, like all the *viva voce* tests of the first and second examinations, for a quarter of an hour. The candidate is asked to “spot” certain parts, to identify specimens under the microscope or in jars, and to answer questions connected with the subject he has been working at. The scope of the examination is shown by a perusal of the standard text-book, “Chalmers Mitchell’s Biology,” which is the only book the student need obtain, so far as his work in this part of the first is concerned.

For the chemistry there are many good text-books. Those most generally used are “Corbin and Stewart’s Chemistry” and “Luff and Page’s Chemistry” (Lewis, 7s. 6d.); of which the former is specially intended for Conjoint students, while the latter contains more information, especially on the chemistry of alkaloids.

The third part of the first examination—practical pharmacy—the student may with advantage defer till he has acquired some knowledge of drugs in his ward work. This part is purely oral, the candidate being asked to “spot” drugs, to name their doses, preparations and strengths, and sometimes he is questioned on their active principles.

Having passed his first, or the first two parts of it, the

student is allowed to enter the dissecting room and commence his study of anatomy and physiology. He must be engaged in the study of these two sciences during one whole summer and one whole winter session before he can enter for his second examination, and during that time he must have actually dissected the several "parts," and must have attended a course of instruction in histology and practical physiology, together with a course of lectures (six months) in physiology and anatomy at a recognised medical school.

The second examination is both oral and written. There are two papers, one in each subject, and each has six questions, of which the candidate must answer at least four within the stipulated three hours. Here, too, as in the "first," the questions are straightforward, and the student who has displayed average diligence in his studies should not have much difficulty in satisfying the examiners at the end of his second year. The *viva voces* are purely objective, and the candidate is rarely asked to describe any structure.

In anatomy Conjoint men will do well to stick to one text-book of general and one handbook of practical anatomy. Individual taste and inclination will guide the selection of a text-book in the majority of cases, for there are so many excellent volumes to be had that selection between them, on their merits, is impossible. Those most commonly used are Gray's "Anatomy" (Longmans, 32s.), Cunningham's "General Anatomy" (Oxford Publications), and Morris's "Anatomy"; and Cunningham's "Manual of Practical Anatomy" (Oxford Publications, 2 vols., 12s. 6d. each). In physiology the more commonly used text-books, such as Halliburton's "Physiology" (Murray, 18s. 6d.),

Starling's "Physiology" (Churchill, 15s. 6d.), Schäfer's "Histology" (Longmans, 9s.), Halliburton's "Chemical Physiology" (Longmans, 4s. 6d.), and Hill's "Practical Physiology" (Arnold, 12s. 6d.), will generally suffice.

For the final or qualifying examination, the student must produce evidence of having attended at a recognised medical school specified courses of lectures on medicine, surgery, midwifery, pathology (including pathological histology and bacteriology), pharmacology and therapeutics, forensic medicine and insanity, and public health; of having received systematic practical instruction in these subjects; and of having performed operations on the dead body. In addition he must show that he has attended, since passing his second examination, the practice of medicine and surgery, demonstrations in the post-mortem room, clinical lectures on medicine and surgery and diseases of women, and of having served as clerk and dresser in the wards. He must also have obtained a certificate of instruction and proficiency in the administration of anaesthetics, and have attended special classes in ophthalmology, in fevers, in lunacy, and in vaccination, and must have attended twenty labours. In addition he must be twenty-one years of age or older.

The examination is in three parts, medicine, surgery, and midwifery, and the student is allowed to take the third part at the completion of four years of medical study. The examination in each part comprises a paper of six questions, four of which must be dealt with, and a *viva voce*. In surgery and medicine there are additional *viva voces* in anatomy and pathology, together with a long *viva* on "clinical cases."

THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

THE Fellowship of the Royal College of Surgeons of England is justly esteemed as the premier qualification that the student can obtain in surgery, and is almost an essential to any man who aspires to the higher surgical posts in England. The student should decide early in his career whether he wishes to obtain the F.R.C.S. For this purpose it is necessary to pass two examinations, a preliminary and a final.

The Primary examination takes place twice every year, in May and in November, and is held in London. The subjects are Anatomy and Physiology, and candidates must have passed the second Conjoint examination or some other equivalent examination which exempts them from it. They must also (except in the case of qualified men) have spent two winter sessions in dissections and attendance at physiology classes at a recognised school. The examination is partly oral and partly written. Two papers are set, one in physiology and one in anatomy, four questions being given with an allowance of three hours. The oral examinations are two, lasting fifteen minutes each, in the two subjects. The examination has the reputation of

being unusually stiff, with more than the average element of luck appertaining to it, but its difficulty should not frighten the student or practitioner of reasonable ability who is willing to pay special attention to the two subjects. A good, sound knowledge of anatomy and physiology is required, and if the candidate has been diligent at his practical work in the dissecting room and laboratory, and has supplemented the knowledge there gained by reading, he stands a good chance of success.

The examination for the Final Fellowship takes place in May and November of each year, and consists of written papers, *viva voces*, clinical examinations, and operative surgery. The fee for the examination is £15 15s., and candidates are required to be members of the college who have been six years in practice or in the study of medicine. Special classes for the Final Fellowship examination are held at most of the London hospitals; and practitioners who intend to enter for it, and have lost touch to any extent with hospital surgical practice, would do well to attend a full course of instruction at one of the medical schools before competing.

THE CAMBRIDGE UNIVERSITY COURSE.

THE degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.C.) at this University are only conferred after the entire course of study with examinations for both has been carried out. The B.C. is, therefore, in itself a complete and registrable qualification to practise, and is frequently so used. To obtain either of these degrees it is necessary to pass five years in the study of medicine after registration as a student, and to reside for three years at the University. It is not necessary to take any degree or examination in arts, except the previous examination, which is a compulsory preliminary to every degree

course, but most medical students at Cambridge take the B.A. degree in a Tripos or Pass examination.

The Previous examination should be passed at the commencement of the first term of residence, unless exemption has already been obtained. The professional examinations are three in number. The first comprises physics, chemistry, and biology; like similar examinations elsewhere, it is divided into two parts, which may be passed separately. The second absorbs at least two years' work, and frequently more; the standard in anatomy and physiology, which must be passed together, is very high, and although

the teaching of these subjects in the University is unsurpassed, the percentage of failures in this examination is always large. During the period of preparation for this examination, the medical student who is desirous of an Arts degree must also arrange his studies to that end. In the third, or Final examination, there are two parts: one consists of pathology, bacteriology, pharmacology, etc., and may be taken as soon as various courses of lectures and laboratory work in those subjects have been duly attended; the other includes medicine, surgery, and midwifery with gynaecology, and it may not be attempted until the completion of the scheme of medical study, which includes three years' attendance on the practice of a recognised hospital.

In pathology and the other subjects of the first part of the Final examination there are excellent courses of lectures and demonstrations in the University laboratories, and Long Vacation courses in these subjects are especially popular. For the remaining part it is usual to study at one of the large London or provincial medical schools, though there are facilities in the University and at Addenbrooke's Hospital for completing the entire course without

leaving Cambridge. This examination is searching, but eminently practical in character; the examiners devote themselves to finding out what a man knows of his work, rather than to tripping him on catch points of no intrinsic importance.

When the third examination has been completed the student may take the degree of B.C. at once, but for the M.B. he must prepare and submit a thesis on some subject in medicine, surgery, or midwifery, selected by himself. Although original research is not essential, this thesis must bear evidence that it is founded on the personal observations and reflections of the author.

For the degree of M.D. it is necessary to have been M.B. at least three years, and to submit a thesis on some subject in medicine (not in surgery), which is a definite research or contribution to the knowledge of its subject. A Master of Arts of not less than four years' standing is allowed to present a thesis for the degree of M.D. whether or not he has taken the M.B., or B.C.—provided only that he has passed all the necessary examinations for those degrees. A degree of Master in Surgery (M.C.) is also given by the University, as well as diplomas in public health and tropical medicine.

OXFORD UNIVERSITY.

At Oxford University two degrees in medicine can be obtained, the M.B. and the M.D.; similarly in surgery there are two degrees, the B.Ch. and the M.Ch. No candidate is eligible for any of these degrees unless he is a graduate in Arts, that is to say, either an M.A. or a B.A.; in which branch of the Arts that degree has been obtained is a matter of little moment. The usual course of the medical student, who has passed Responsions, is to come up to Oxford and work at the Preliminary Science examinations, which are likely to take him two years or thereabouts, and then to spend a further two years in study for the Final Honour School of Physiology, in which he takes his degree of B.A. He next has to pass examinations in Human Anatomy, and *Materia Medica* with Pharmacy, after which he proceeds to some town in which the opportunities for clinical study are greater than they are at Oxford, and prepares himself there for his second Professional examination, which comprises the subjects of Medicine, Surgery, Midwifery, Pathology, Forensic Medicine, and Hygiene. When this has been passed, the candidate may supplicate for and obtain the degree of M.B., B.Ch.

Such, in a rough outline, is the programme followed by the majority of medical students at Oxford; but there are not a few exceptions, and these will be indicated in the more detailed account which follows. To begin with, it may be said that the Preliminary Science examinations are in four subjects: Mechanics and Physics, Chemistry, Animal Morphology, and Botany. Examinations in each of these subjects are held at Oxford twice a year, and a fairly high standard of proficiency in them is necessary for a pass. When these Preliminary Science examinations have been safely negotiated, the medical student turns his attention to his Professional examinations. The first of these, commonly known as the "First M.B.," includes Organic Chemistry, Human Physiology, Human Anatomy, and *Materia Medica* with Pharmacy. Like the Preliminary Science examinations, these subjects may be attacked one by one; and candidates who have obtained a first or second class in Chemistry in the final School of Natural Science are excused Organic Chemistry; while those who have obtained a first or second class in Animal Physiology in their science finals are similarly excused Physiology. It is for this reason that most medical students take up

Animal Physiology for their final school, i.e. as the subject in which they take their B.A. degree; for by so doing they save more than a year's work. The Second Professional examination is attacked after the candidate has pursued his clinical studies at some large hospital, almost always one of the London hospitals, for two or three years; it is by far the most exacting of the examinations Oxford medical students have to face, for the three subjects of Medicine, Surgery, and Midwifery must be passed together. Pathology or Forensic Medicine, and Public Health may be, and commonly are, taken separately. Before entering for the Second Professional examination (or "Second M.B.") the candidates have to present certificates of attendance at a laboratory course of Practical Pathology and Bacteriology, of having acted as a post-mortem clerk for three months, as surgical dresser for six months, as clinical clerk for six months; they have also to produce certificates to show that they have received instruction in Infectious Fevers, Mental Diseases, and Vaccination, and have attended Labours. The examination is held partly in writing, partly *viva voce*, and (except in Forensic Medicine and Public Health) partly is practical, and is held twice a year.

The degree of M.D. is granted to Bachelors of Medicine of the University who have entered their thirty-ninth term—it should be remembered that there are four terms in the official year—who have presented a dissertation on some medical subject that is approved by the Professors of the Faculty and Examiners for the degree of Bachelor of Medicine for the time being whose subjects are dealt with in it. The degree of M.Ch. is granted to Bachelors of Surgery of the University who have entered their twenty-seventh term and satisfied some other requirements; the examination for this degree is held annually in June.

The University also grants a diploma in Public Health. This is open to all registered medical practitioners, and is in subjects bearing on Preventive Medicine and Public Health—namely, hygiene, general pathology, with special relation to infectious diseases, sanitary law, sanitary engineering, and vital statistics. The examination is held yearly in the Michaelmas term: it is in two parts, which may be taken either separately or together.

The most valuable and valued of the prizes open to

Oxford medical graduates are the Radcliffe Travelling Fellowships. These are three in number, each of the annual value of £200, and tenable for three years, and are awarded, one a year, after an examination held in February. Candidates must have passed all the examinations required for the degrees of B.A. and M.B., and must not have exceeded four years from the time of passing the last examination required for the latter degree. And each candidate must declare that he intends to devote himself during the period of his tenure of the Fellowship to the

study of Medical Science, and to travel abroad with a view to that study; at least eighteen months of the three years must be spent abroad. The Radcliffe Prize, founded two years ago by University College, worth £50, is awarded biennially for research in some branch of medical science. The Rolleston Memorial Prize is awarded, biennially, for original research in a number of subjects including Physiology and Pathology; it is open to Cambridge men as well as to Oxford, and no candidate may have exceeded ten years from his matriculation.

THE LONDON UNIVERSITY COURSE.

THE University confers the degrees of Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.), Doctor of Medicine (M.D.) and Master of Surgery (M.S.).

The student who desires to take the degree of M.B. of the London University has to pass the University Matriculation Examination, held thrice yearly in January, September, and June. The matriculation is accepted as a preliminary examination for graduation or qualification in medicine, provided the candidate has taken Latin as one of the optional subjects, and formerly no other examination exempted from the matriculation so far as degrees of the University were concerned. Recently, however, the Senate has seen fit to rule that several other examinations may be accepted instead of the usual matriculation.

After matriculating the student must attach himself to one or other of the various medical schools, and devote himself during his first year to mastering the subjects—chemistry, biology, and physics—required for his preliminary scientific or first professional examination. It will take him a full year to work up these subjects. Many candidates instead of doing the preliminary scientific work somewhat more widely, and attempt to take the Intermediate scientific, which, provided the candidate has passed in the requisite subjects, exempts from the Preliminary scientific, and at the same time enables the student to proceed to his B.Sc. degree if he chooses.

The student is at present admitted to the Intermediate examination, the subjects of which consist of anatomy, physiology, and pharmacology, two years after having

passed Part I. of the Preliminary. Time spent in working at the subjects of anatomy and physiology is not recognised by the University until the student has passed the Preliminary. His second and third years are thus spent in work in the dissecting room and physiological laboratory. Here he will be able to work more broadly and more minutely at the subjects than the Conjoint student is able to do. The examination itself is of average difficulty. The candidate is required to dissect a part, and is examined *viva voce* and by written papers in each subject.

Having passed his "Inter.," the student begins clinical work. Two years of clinical study were formerly required, but now three years will be necessary, while two and a half years will be the minimum period required for the preliminary subjects. Thus the full course will in future occupy at least five and a half years from the time of matriculation.

The final is by no means a stiff examination; compared with the Preliminary examination it is even an easy one. Special attention must be paid to a few subjects. Thus the student will do well to keep himself acquainted with pathology and morbid anatomy; midwifery and forensic medicine, also, are subjects in which many candidates fail. The last examination is written, oral, and practical. The candidate is required to examine and report on selected cases, to do practical bacteriological work, and to be acquainted with the essentials of operative surgery, though actual operations on the dead subject are not demanded.

HIGHER DIPLOMAS.

The Royal College of Physicians of London grants its membership after examination to graduates in medicine of recognised Universities, or to licentiates of the College, being above the age of twenty-five years, who do not engage in trade, do not dispense medicine, and who do not practise in partnership. The examination, which is held in January, April, July, and October, is partly written and partly oral. The fee for the membership is £42, but if the candidate is a licentiate the fee is the difference between what he has already paid and £42. In either case £6 6s. is paid before examination. The fellowship is elective.

The Royal College of Physicians of Edinburgh admits to its membership licentiates or graduates over twenty-four years of age after examination in medicine and therapeutics and one or more of the following subjects selected by the candidate: (1) One or more departments of medicine specially professed, (2) psychological medicine, (3) general pathology and morbid anatomy, (4) medical jurisprudence, (5) public health, (6) midwifery, (7) diseases of women. A candidate forty years of age and ten years in practice may be excused any part of or all the examination by the Council. The fee to be paid by a licentiate is fifteen guineas, by others thirty-five guineas. A member of three years' standing may be elected a Fellow. The fee is £64 18s.

The Royal College of Surgeons of Edinburgh.—The Fellowship is granted, after examination, to any registered practitioner who is twenty-five years of age and has been in practice for two years. The examinations are written, oral, and practical. The fee is £30 to those who hold the diploma of licentiate of the College, and £45 to others (no stamp duty is payable on the diploma).

The Faculty of Physicians and Surgeons of Glasgow.—Registered practitioners are admitted to the Fellowship by examination and by subsequent election. Four examinations are held annually (January, April, July, October). Fourteen days' notice must be given. The fee is £30 unless the candidate desires to qualify to hold office, when it is £50. In the case of a licentiate of the faculty, £25 and £15 respectively.

The Royal College of Surgeons of Ireland grants the Fellowship after examination. If the candidate is of less than ten years' standing he is examined (at the end of his third winter course of dissections) in anatomy, including dissections, physiology, and histology. For the Final, surgery, including clinical and operative surgery and surgical pathology, are the subjects. If of over ten years' standing the subjects are surgical anatomy, surgery, and surgical pathology.

THE PUBLIC SERVICES.

THE NAVY MEDICAL DEPARTMENT.

THIS Service is only open to the registered graduate of European birth between 21 and 28 years of age. He must pass an entrance examination and gain at least one-third of the possible marks, and he must satisfy the physical requirements of the Medical Board.

The examination will consist of two parts, as follows :— (i.) compulsory subjects, and (ii.) voluntary subjects. The former are (a) medicine, materia medica, therapeutics, and general hygiene; (b) surgery and surgical anatomy; (c) pathology. The attention of candidates is especially drawn to the importance of the section of Operative Surgery. No candidate will be considered eligible who has not obtained at least one third of the maximum marks in each of the above compulsory subjects. The voluntary subjects are French and German. The knowledge of modern languages being considered of great importance by the authorities, all intending competitors are urged to qualify in French and German.

Successful candidates immediately after passing the examination will receive commissions as surgeons in the Royal Navy, and undergo a course of practical instruction in naval hygiene, the diseases of warm climates, bacteriology, surgery of gunshot wounds, etc., radiography, and the photography in connection with it, at Haslar Hospital.

Every medical officer will be required to undergo a post-graduate course of three months' duration at a metropolitan hospital once in every eight years (should the exigencies of the service permit), and this as far as possible during his surgeon's, staff surgeon's, and fleet surgeon's period of service. While carrying out this course the medical officer will be borne on a ship's books for full pay, and will be granted lodging and provision allowances, and travelling expenses as for service under the regulations to and from his home or port; the fees for each course (not exceeding £25) will be paid by the Admiralty on the production of vouchers at the end of the course. The medical officer will be required to produce separate certificates of efficient attendance in the following : I. The medical and surgical practice of the hospital; II. A course of operative surgery on the dead body; III. A course of bacteriology; IV. A course of ophthalmic surgery, particular attention being paid to the diagnosis of errors of refraction; V. A practical course of skiagraphy.

THE ROYAL ARMY MEDICAL CORPS.

A candidate for a commission in the Royal Army Medical Corps must be 21 years and not over 28 years of age, and must possess a registered qualification to practise. He must pass an entrance examination, and, having gained a place and having satisfied the Medical Board of his physical fitness, he must undergo two months' instruction in hygiene and bacteriology, and afterwards proceed to Aldershot for instruction in the technical duties of the corps.

The entrance examination is held twice a year in London, usually in January and July, and an entrance fee of £1 is charged for admission to it. It lasts about four days. The examination is of a clinical and practical character, partly written and partly oral. It consists of examination and report upon a medical case and commentary upon a case in medicine; clinical medical cases and *viva voce* on medical pathology; examination and report upon a surgical case and commentary upon a case in surgery; clinical surgery and pathology (including diseases of the eye), and operative surgery, bandaging, surgical instruments and appliances.

After the lieutenant on probation has passed the examinations in the subjects taught, and has satisfied the director-general that he possesses the necessary skill, knowledge, and character for permanent appointment to the Royal Army Medical Corps, his commission as lieutenant will be confirmed. A lieutenant on probation who, at the time of passing the examination for admission to the Royal Army Medical Corps, holds, or is about to hold, a resident appointment in a recognised civil hospital, may be seconded for the period, not exceeding one year, during which he holds the appointment. While seconded he shall not receive pay from Army funds, but his service shall reckon towards promotion, increase of pay, gratuity, and pension.

THE INDIAN MEDICAL SERVICE.

Candidates must be natural-born subjects of His Majesty, of European or East Indian descent, between 21 and 28 years of age at the date of the examination, of sound bodily health, and in the opinion of the Secretary of State for India in Council in all respects suitable to hold commissions in the Indian Medical Service. They may be married or unmarried. They must possess, under the Medical Acts in force at the time of their appointment, a registrable qualification to practise both medicine and surgery in Great Britain and Ireland.

The physical fitness of each candidate will be determined by a Board of Medical Officers, who are required to certify that his vision is sufficiently good to enable him to pass the tests laid down by the Regulations. The candidate will be examined by the Examining Board in the following subjects : (1) medicine, including therapeutics; (2) surgery, including diseases of the eye; (3) applied anatomy and physiology; (4) pathology and bacteriology; (5) midwifery and diseases of women and children; (6) materia medica, pharmacology, and toxicology. The examination in medicine and surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. No syllabus is issued in the subjects of pharmacology and toxicology, but the examination will be conducted so as to test the general knowledge of the candidate in these subjects. No candidate shall be considered eligible who shall not have obtained at least one-third of the marks obtainable in each of the above subjects and one-half of the aggregate marks for all the subjects.

After passing examination, the successful candidates will be required to attend one entire course of practical instruction at the Army Medical School or elsewhere, as may be decided, in : (1) hygiene; (2) military and tropical medicine; (3) military surgery; (4) pathology of diseases and injuries incidental to military and tropical service. This course will be of not less than four months' duration, and at its conclusion candidates will be required to pass an examination in the subjects taught therein.

THE COLONIAL MEDICAL SERVICE.

In the following countries there are medical departments regulated from the Colonial Office :—Jamaica, Trinidad, Tobago, British Guiana, Windward and Leeward Islands, British Honduras, Fiji, Ceylon, Straits Settlements, Federated Malay Straits, Hong-Kong, British East Africa, Uganda, Mauritius, Seychelles, Gibraltar, St. Helena, Falkland Islands, Cyprus, Gambia, Sierra Leone, the Gold Coast, Northern and Southern Nigeria. The last four of the countries named have been formed into the West African Medical Staff.

THE FUTURE OF THE PUBLIC HEALTH SERVICE.

MUCH has been written already concerning the rapid progress and the great developments which have been made in preventive medicine during the last decade. Such retrospection and introspection have been of value in showing the present position of this important service. During the past twelve months several questions of the highest importance have come prominently before the medical profession—and, indeed, before the general public—which render it advisable and interesting to forecast the future of preventive medicine. Some of these most important questions are the majority and the minority reports of the Royal Commission on the Poor Laws, and the defects which have been brought to light as a result of the medical inspection of school children.

Important side-issues have arisen in connection with these questions which require the most earnest consideration and foreshadow great future progress in the public health service. Until recently many of these questions were not considered to be within the province of public health, but there is evident a change of opinion as to the future scope of this branch of medicine, and the old ideas are undergoing considerable modification. For instance, the opinion has been expressed frequently that the public health branch of medicine is concerned with groups of people rather than with individuals. It is probable that the range of public health in the future will necessitate more prominent attention being given to the individual in health or disease than has been given in the past. This modified view has received a great impetus by the reports of the Royal Commission on the Poor Laws issued during February 1909, which form one of the most important Blue Books of modern times. Although there are two different sets of opinions, as shown by the majority and minority reports, both sides have many points in common. Both agree to abolish the direct election of the guardians, and with it the guardians themselves; to abolish the Union area and the general workhouse, substituting for the one a much larger area, and for the other a system of classified institutions; to substitute the name "Public Assistance" for Poor Law; to make the new area the county or the county borough; and to make the Council either itself the authority or directly responsible for appointing the authority.

The majority recommend that the new public assistance authority should be a statutory committee to be appointed by the Council, and that of this one-half may be members of the Council, and the other half are to be outside the Council and to consist of persons experienced in the local administration of public assistance or other cognate work. Thus the presence and help of certain ex-guardians and charity organisation officials would be available.

On the other hand, the minority report recommends that all the work of the existing guardians should be handed over bodily to the Council, and that the Poor Law should be broken up by dividing it amongst the different existing committees for health, education, pensions, etc. For example, they recommend that the provision for (a) children of

school age and (b) the sick and the permanently incapacitated, the infants under school age, and the aged needing institutional care, should be assumed under the direction of the county and county borough councils by (a) the education committee, and (b) the health committee respectively.

Again, it will be remembered that during the year 1907 the Board of Education approved of the principle of the compulsory medical examination of children in public elementary schools, and that it initiated a medical department under its own auspices for the administration thereof. As a result, a very large number of school medical officers have been appointed throughout the country to carry out the required work. In many localities, in accordance with the recommendation of the Board of Education, the work of medical inspection is being carried out in intimate conjunction with the public health authority, and under the supervision of the medical officer of health. The advantages of this arrangement are very great. Consequently, an immense number of school children have been examined during the year 1908 in various parts of England. This has resulted in the discovery of a considerable number of children suffering from defects which should be remedied, so that they may be enabled to continue in attendance at school without injury to themselves, and with the fullest educational advantages. It will be admitted generally that the accumulation of large volumes of statistics without further steps will not benefit the children. Experience shows that a large number of children who have remediable defects have not received suitable treatment. In some cases apathy, and in other cases poverty of the parents, is the cause.

It is probable that the treatment of many of these children will continue to be ignored unless the cases can be followed up persistently by home visiting, and unless other facilities for treatment can be provided. Therefore each locality will be obliged to consider whether the present available institutions are able to deal with the cases, or whether new organisations should be commenced. Thus it is clear that the work of various health departments in this country may be considerably modified and extended in the near future.

In recent years the work of the public health service has extended from the steps taken to prevent infection, recurrence of nuisances, etc., to a wider sphere, having for its object the prolongation and saving of life. As instances of such extended measures may be mentioned industrial legislation in the prevention of lead poisoning, and in improved conditions of the cotton industry, the administration of the Midwives Act, the Notification of Births Act, the appointment of health visitors, school medical inspection, and the appointment of school nurses.

There is already a close connection between the work of health, education, and Poor Law authorities. But at present there is a considerable amount of overlapping in the work of these three organisations. In future such connection will become much closer, with a diminution in the overlapping. Only by such co-ordination can social efficiency be secured.

To a certain extent the principle of amelioration has been recognised already in dealing with infectious diseases, in provision for blind, deaf and dumb, epileptic, mentally and physically defective children, and also by the administration in many districts of the Education (Provision of Meals) Act. In a few places the treatment of dirty heads, ringworm, and the provision of spectacles have been inaugurated. It is very probable that the above ameliorative measures will in the future become more general, and also that similar measures will extend to other diseases and conditions.

In a circular (No. 576) issued by the Board of Education in November 1907, under the powers of the Education (Administrative Provisions) Act, local education authorities are advised, with no uncertain voice, to formulate schemes of amelioration so that medical inspection, with its records of defects, may be followed by the treatment of such defects. The defects which have been discovered by systematic medical inspection of school children, many of which are remediable, are mainly defects of vision and affections of the eye, ear, teeth, nose, and throat. Since the eye and the ear are the most important avenues of learning, it is necessary that defects of these organs should receive attention with the least possible delay. As to the best method of ensuring this, considerable thought and care must be exercised. Certain lines of action, however, have been indicated already.

In August 1908, the Board of Education issued another circular (596) in which, amongst other things, the arrangements for attending to the health and physical condition of school children are discussed. Included in these arrangements are school clinics, which may serve two purposes, namely, (a) for further and more scientific examination of cases in which medical inspection has indicated the existence of defects in a child which cannot conveniently be investigated on the premises of an ordinary public elementary school, (b) for the purposes of treatment of defects revealed by inspection. It should be mentioned, however, that before sanctioning the establishment of a school clinic as an

"arrangement" under section 13 (1) (b) of the Act, the Board will require detailed information as to the conditions and scope of such a school clinic. For example, it would be necessary to take such precautions that only those children shall be treated in a school clinic for whose treatment adequate provision cannot otherwise be made, whether by the parents or by voluntary associations and institutions, such as hospitals, or through the agency of the Poor Law. Also the Board would require detailed information concerning the precise diseases and defects to be treated, by whom and on what terms and conditions the treatment will be carried out and what will be its extent, and what is the estimated cost of the clinic in respect to buildings and equipment, maintenance, and administration, and treatment, and how it is proposed to meet this cost—out of the rates or otherwise.

Again, it is probable and highly desirable that the public health service of the future should be more closely associated than it has been in the past with the different voluntary organisations which are striving in any town or district to improve the social conditions of its citizens. Even now in certain districts a beginning towards this end has been made. For example, co-operation between a sanitary authority and local Charity Organisation Societies in forming After-care Committees, to obtain work for, and exercise a kindly supervision over, patients who have been discharged from consumption sanatoria with the disease arrested, is already showing beneficial results. Again, After-care Committees containing voluntary workers are being formed with the object of exercising a wise supervision, in co-operation with local education authorities, over children who have left schools established for mentally deficient children. Many other instances could be mentioned to show that in the future the work of the public health official and the voluntary helper will be more closely associated than it has been hitherto; and it is probable that in no branch of medical practice will expansion in the near future be so rapid as in the public health service.

PUBLIC HEALTH DIPLOMAS.

DIPLOMAS in Public Health are granted by nearly all examining bodies. The Conjoint Board of England grants a diploma in public health. The Universities of Oxford, Cambridge, Durham, Liverpool, Manchester, Sheffield, and Leeds grant diplomas in hygiene and public health to their own graduates or to graduates of sister universities, and in some instances also grant diplomas to qualified practitioners who may not be graduates. The requirement for each diploma varies, but particulars may usually be obtained on application to the various registrars. The most popular diplomas appear to be the Cambridge D.P.H. and that granted by the University of Durham. For both the candidate must be a registered medical practitioner and must have attended special courses of instruction at recognised centres or with recognised teachers for a specified period. The Conjoint Board of Scotland requires candidates to produce evidence of attendance (subsequent to obtaining a registrable qualification) for six months at a Public Health Laboratory, and for six months under a Medical Officer of Health of a county or of a large urban

district. There are two examinations, and candidates may present themselves for both of them at one period or for either examination separately. The fee is £12 12s., or £6 6s. in respect of each examination; and candidates referred are readmitted on a fee of £3 3s. in respect of each examination. The examination is held in Edinburgh or in Glasgow, there being two periods of examinations yearly—October and May. Applications for examination in Edinburgh to be sent to Mr. James Robertson, 54 George Square, Edinburgh; and in Glasgow to Mr. Alexander Duncan, B.A., LL.D., 242 St. Vincent Street, Glasgow, not later than fourteen days before the examination day. The University of Dublin confers degrees after examinations upon M.D.s or graduates in Medicine and Surgery of Dublin, Oxford, or Cambridge, and the Royal University of Ireland only on graduates of Medicine of that University. The Conjoint Examining Board grants diplomas after examination to candidates who have complied with the regulations of the General Medical Council and passed the required examinations.

THE MEDICAL STUDENT AND HIS WORK.

SYSTEM IN THE MEDICAL STUDENT'S CAREER.

WITH the possible exception of those medical students whose fathers are members of the profession, there are probably few indeed who at the commencement of their studies have any correct perspective of the relative importance of the various branches of study outlined for them in the medical curriculum, or of the relative value to them in after years of the various parts of their medical education, or even of the different kinds of examination they are setting out to pass.

Those students of medicine who are sufficiently alive to the necessity of taking thought what their programme for the next five years or so is to be, and have taken the trouble to get the advice of their Dean or other constituted authority, are generally impressed with the usefulness of a degree in medicine as opposed to diplomas alone, and they direct their studies from the outset with the aim and object of acquiring that particular degree which chance or circumstances happen to render most accessible or most coveted. Others, less willing to take advice, less disposed towards the extra exertion commonly entailed in the preliminary examinations, or less able to face the additional financial burden, set themselves a lower standard from the first, and this group includes a very considerable proportion of the whole number. It is one of the commonplaces of medical school gossip how often the latter come to regret eventually the lost opportunities of their early days, and how hard those who do make up their minds to retrieve the position must work to regain the status of their more far-seeing contemporaries.

On the other hand, when all is said and done, it is also to be admitted that many, very many, of those who begin with the idea of taking a degree in medicine never complete the necessary exercises, and remain content with the diplomas, which are after all a complete and satisfactory guarantee of professional efficiency, but one with a rather lower market value in the eyes of the non-medical public. And of those who thus begin to work for a degree, but never obtain it, there are many who have wasted in fees and in extra study for the first and second professional examinations time and money in very fairly considerable quantities. So that in commending indiscriminately to medical students that desire for the best which is certainly preferable to a dogged contentment with the second best, it must not be overlooked that there are those of whom it is safe to prophesy that too ambitious a scheme is likely to be a waste of energy.

Taking this into account, and taking into account also a plain truth which is seldom appreciated by students, that there is really no examination in the whole range of degrees or diplomas which is outside the capacity of a man of strictly average ability *if he will work*, it remains to be said that the intelligent student who means to get the best out of his studies and to fit himself for a successful career when student days are done should start with at least a

rough scheme of how long his curriculum is to take him and what it is to comprise. He should have clearly fixed in his mind how many years he can spare for his anatomy and physiology, and what examinations he means to pass in those subjects. He should, if he means to enter ultimately for the Fellowship of the Royal College of Surgeons, allow himself time not only for the Intermediate examination of the particular university or corporation from which he expects finally to acquire his qualification, but also for the primary Fellowship, as it is commonly called. To go back from his ward work after qualification, and to pick up afresh the unravelled threads of anatomy and physiology is a task which is undertaken every year by scores of men who curse the blindness which caused them to neglect the said "primary" after passing their Intermediate examination.

Leaving out of account those men who wander off from the main high road to medical practice to cultivate the by-paths of zoology, physiology, and the other sciences included in the first half of the medical student's training, the rule should be faithfully kept of getting rid of one sub-division of the medical course before attempting to tackle the next. The student who still has any examination to pass in chemistry, physics, or zoology should on no account whatever be tempted to commence the study of anatomy or physiology; and similarly he who has still any professional test of the latter subjects to satisfy should rigidly exclude bacteriology, pathology, or clinical work of any kind until he has overpast it. It may seem superfluous to insist on such an elementary principle of doing with all one's might whatsoever the hand findeth to do; but experience has shown that there is a certain proportion of men who cannot resist the temptation to dabble in study not strictly germane at the moment to the advancement of their careers, and more than one instance could be quoted of men who have failed again and again at anatomy because of an irresistible inclination to prefer the study of pathology or of clinical surgery.

The prudent man, then, is he who sketches out roughly for himself the qualifications he wishes to take—erring, if at all, on the ambitious side rather than the self-distrustful—and the length of time he proposes, examiners willing, to devote to the various compartments of his progress thereunto. Upon the great majority, those who intend to make the daily practice of medicine and surgery their means of livelihood, it cannot be too strongly impressed that whereas their preliminary studies are merely a means of fitting them for their later ones, the latter differ entirely in being a direct preparation for their after-life and careers. It follows therefore that if there is one period more than another during which an effort should be made to secure a real proficiency, which shall be lasting and beyond examination requirements, that period is essentially the clinical one, when in the wards, operating theatres, casualty

rooms, and other subdivisions of a teaching hospital the student is laying the foundations of something far more valuable than degrees or diplomas, namely, clinical experience.

The conclusion is that during student years he is wise who, intending to practise medicine, or surgery, or midwifery, or all three, makes his preliminary studies strictly a means to the passing of the selected examinations and gets done with them as quickly as he can; on the other hand, he who adopts similar slapdash tactics with his final examinations may indeed, by luck or successful cramming, obtain a qualification to practise, but is yet doing a foolish thing and one he may ultimately have cause to regret. If, however, he proposes to take the appointment of a resident medical officer in a hospital, he has then the opportunity of his life for acquiring clinical wisdom, and a somewhat hurried preparatory student career may not stand in his way if he is ready and willing to learn and to

cover the deficiencies of training by reading. To plan out beforehand, roughly and in outline, the ideal and hoped-for course of study and examinations is, therefore, a scheme which is worth the serious attention of those beginning medical study. Many things—for example, ill-health or private affairs, or idleness—may arise to cause wide departure from such an ideal; and those must be reckoned not only praiseworthy, but fortunate also, who keep to their schedule and meet with no check to their progress up the educational ladder. Yet if for each item in which the result falls short of the ideal a reason can be assigned; if the student on reaching his qualification can say where and why and how some of his time was wasted; then equally he is entitled to the satisfaction of knowing that otherwise and apart from such demonstrable causes of delay or of partial failure he has deserved his success by patiently seeking and toilsomely ensuring it.

THE MEDICAL SCHOOLS OF THE UNITED KINGDOM.

LONDON.

St. Bartholomew's Hospital Medical School.—St. Bartholomew's is the oldest and second largest hospital in London; the site has been recently enlarged by the purchase of $1\frac{1}{2}$ acre of adjoining ground, and two blocks of new buildings have been completed and opened for use. The first block of new buildings (erected at the cost of £130,000) was opened by H.R.H. the Prince of Wales in July 1907. These comprise casualty and out-patient departments, eight special departments, new quarters for the resident staff, a dining hall and common room for students, etc. The second is the pathological block, and includes a new post-mortem room and extensive laboratories for bacteriology, chemical pathology, pathological histology, and clinical pathology, as well as several rooms for special research. The Medical School is complete in every department, and provides lectures and practical laboratory teaching in the preliminary sciences and intermediate subjects, as well as in the purely professional and clinical parts of the curriculum. Scholarships and prizes to the total value of £900 are awarded annually.

Charing Cross Hospital.—This hospital contains 200 beds, and has attached to it a medical school. Classes for University, Conjoint, and Fellowship courses are held, and there are special classes for the practical work required for the D.P.H. course. Total fees, including students' club: For general students: (1) Composition fee 115 guineas; (2) Sessional payments: Entrance fee 10 guineas and 15 guineas at the commencement of each winter and 10 guineas at the beginning of each summer session so long as the student remains in the school. The usual resident and students' appointments are open to students, and several valuable prizes and scholarships are awarded annually by the school. Full information respecting the Medical School, and the course of study recommended, may be obtained on application to the Dean at the Medical School, Chandos Street, Strand, W.C.

St. George's Hospital.—The winter session commences on October 1, but students can enter at any time. Special courses are given, in which the requirements of university and other examinations receive careful attention. The hospital contains 350 beds, and has a convalescent hospital of 100 beds at Wimbledon. The usual resident and

students' appointments are open to students. The entire teaching and laboratories are now devoted to purely clinical subjects, as in other universities, to the great advantage of students in their fourth and fifth years of study. Arrangements have been made with the University of London for students who enter St. George's during the first, second, or third year of the curriculum to carry out the necessary courses of instruction at either University College or King's College. Students have therefore the advantages of the lectures and practical classes of these Colleges of the University during the preliminary and intermediate portions of their studies, and then complete their course in a school entirely devoted to medicine, surgery, and the study of disease. Further particulars may be obtained on application to the Dean of the Medical School, Dr. E. I. Spriggs.

Guy's Hospital.—This hospital contains 608 beds, and has a large medical school. There are special departments, and a large number of student and resident appointments available. Special classes are held for the London University, Oxford, Cambridge, and Fellowship courses. Students have the advantage of a large and well-equipped residential college, squash-racket court, swimming-bath, and gymnasium. The athletic ground is distant only 15 minutes from the hospital. Scholarships and prizes to the amount of £800 are awarded annually. For further particulars application should be made to the Dean of the Medical School, Dr. H. L. Eason.

King's College Hospital.—King's College Hospital, which contains 220 beds, is situated in Portugal Street, Lincoln's Inn. The new hospital, which is now being built in the neighbourhood of Denmark Hill, will be on a much larger scale than the present institution, and will possess every modern requirement for both patients and students. The teaching of the preliminary subjects, including chemistry, physics, biology, anatomy, and physiology, is given at King's College in the Strand, and students entering now will by the time they are sufficiently advanced to study in the wards be able to do so in the new hospital. The composition fee is—for advanced medical students—70 guineas; for the whole University course, 140 guineas; for whole Conjoint course, 135 guineas. Full particulars and prospectuses can be ob-

tained by applying to Peyton Beale, Esq., F.R.C.S., Dean of the Hospital.

St. Mary's Hospital Medical School.—St. Mary's Hospital contains at present 301 beds, of which 31, situated in the Clarence Wing, are devoted to treatment by Therapeutic Inoculation, under the direction of Sir Almroth Wright, F.R.S. Systematic clinical teaching is given daily in the wards and out-patients' department and in the various special departments of the hospital. The medical school provides for the entire curriculum, and contains well-organised departments for preliminary scientific subjects. The composition fee for the whole curriculum is £140, or 60 guineas for the clinical curriculum only. The athletic ground is eight acres in extent, and is situated at North Kensington, within an easy distance of the medical school. There is also a students' club, consisting of large dining and smoking rooms, situated in the hospital premises.

The Middlesex Hospital Medical School.—The hospital, which is in Mortimer Street, W., contains 340 beds, including lying-in wards and special wards for children and the diseases of women. There is a cancer wing which has 40 beds, and special research laboratories, and the hospital therefore offers unequalled opportunities for the study of this disease, both clinically and pathologically. A complete electrical and x-ray department has been provided in a temporary building which has been erected in the courtyard of the hospital. Three entrance scholarships of the value of £100, £50, and £25, and a University scholarship value of £50, open to students of the Universities of Oxford and Cambridge, are offered for competition in September. Full particulars can be obtained on application to the Dean.

The London Hospital Medical College.—The London Hospital is the largest institution of its kind in England, and contains 922 beds. Being situated in the East End, it ministers to a very large and poor district. The total number of patients during 1908 was 257,656, made up of 14,781 in-patients and 242,875 out-patients. During the year 4,735 major operations were performed in the theatre, while the number of operations under anaesthesia was 16,615. Seven entrance scholarships are offered annually, including the Price Scholarship in science, £120; the Epsom Scholarship, £126; and entrance scholarships in science, anatomy and physiology, and arts. The composition fee is 120 guineas if paid in one sum, or 130 guineas if paid in three annual instalments. A reduction of 15 guineas is allowed in the case of sons of medical men. Appointments: Registrars, resident accoucheurs, house physicians, house surgeons, etc. More than 100 of these appointments are made annually. All appointments are free to full students, and all resident appointments have board fee. Full information may be obtained from the Warden of the Medical school. New laboratories for physiology, chemistry and physics are now being added, and will be ready for use on September 1. The Club Union Athletic Ground is within easy reach of the Hospital.

St. Thomas's Hospital.—The building occupies a unique position by the river, opposite the Houses of Parliament, and contains 600 beds. The Medical School is fully equipped for the teaching of all subjects of the curriculum. A fine museum and large library are at the disposal of the students. There are three lecture theatres, large dissecting-room, and laboratories for biology; chemistry, physics, physiology, and pathology. The Students' Club comprises restaurant and smoking and reading room. The curriculum is arranged to meet the requirements of all the

examining bodies. Special classes are held for the examinations at the University of London and for the First and Final Fellowship Examinations of the Royal College of Surgeons of England. Tutorial classes in all subjects precede the various examinations.

University College Hospital Medical School comprises the departments of medicine and clinical medicine, surgery and clinical surgery, midwifery and gynaecology, pathology and morbid anatomy and clinical pathology, bacteriology, mental physiology and mental diseases, dental surgery, practical pharmacy, and other departments for the study of special diseases such as those of the eye, skin, ear, and throat, and for instruction in the use of anaesthetics, and in electro-therapeutics and the application of the x-rays. Scholarships and exhibitions to the value of about £450 are offered for competition every year. Composition fees for the courses required by the University of London: For the final M.B., B.S. course, 80 guineas, or in two instalments of 50 and 32 guineas; for the medical education required by the Examining Board in England and the Society of Apothecaries, for the course required for the third examination, 80 guineas, or in two instalments of 50 and 32 guineas.

Westminster Hospital Medical School.—Westminster Hospital was the first institution of its kind in London which was founded by the voluntary contributions of the public. There is accommodation for upwards of 200 in-patients. There is a Students' Clubs Union, the subscription for membership of which is included in the general fees. The composition fee is 120 guineas for the course of the Conjoint Board, and 130 guineas for that of the University of London. Eight Entrance Scholarships are offered for competition amongst students entering in October and five for those entering in May. Special facilities are afforded for obtaining resident and clinical appointments.

London (Royal Free Hospital) School of Medicine for Women.—The Royal Free Hospital is in Gray's Inn Road, and the London School of Medicine for Women is in Hunter Street, Brunswick Square, W.C. There are 165 beds in the hospital, all of which are available for clinical teaching. There are numerous scholarships and prizes offered annually in connection with the school, among which may be mentioned the School Scholarship of £30 and the St. Dunstan's Medical Exhibition of £60 a year for three years, extendible to five years.

PROVINCIAL SCHOOLS.

The University of Birmingham (Faculty of Medicine).—In order to obtain the degrees of M.B. and Ch.B. five examinations have to be passed. The first is in chemistry, physics, and elementary biology; the second in anatomy and physiology; the third in pathology, bacteriology, and materia medica and pharmacy; the fourth in forensic medicine, toxicology, and public health; and the fifth, or final, in medicine, surgery, midwifery, gynaecology, therapeutics, mental diseases, and ophthalmology. The University also grants degrees and a diploma in dental surgery, and a diploma (D.P.H.) and a degree in Public Health (B.Sc.). The General Hospital and the Queen's Hospital, containing between them over 500 beds, are amalgamated for the purpose of clinical instruction, which is carried on under the direction of the Birmingham Clinical Board. Medical students also have free access to clinical instruction at the Eye, Ear and Throat, Orthopaedic and

Spinal, Women's, and Children's Hospitals, which are associated with the University. The composition fee for the whole course of lectures and instruction at the University is £85, besides which there is a composition fee for attendance on the medical and surgical practice and the clinical lectures at both the General and Queen's Hospitals of £42, making a total of £127. Dean: Professor Gilbert Barling, F.R.C.S.

University College, Cardiff.—Since it was founded in 1883, University College, Cardiff, has prepared students for the Preliminary Scientific examination of the University of London, and for the corresponding examinations of other licensing bodies. In 1893, Chairs of Anatomy and Physiology and a Lectureship in Materia Medica and Pharmacy were established, making it possible to spend three out of the five years of the medical curriculum at this school. Arrangements have been made with the managing committee of the Cardiff Infirmary to give students of the college the privilege of attending this hospital, which contains 180 beds. The composition fee for the three years' course of study for the Preliminary Scientific and Intermediate Examination for the London M.B. is £57 10s. A complete curriculum for the D.P.H. of the University of Wales and of other British Examining Boards may also be attended.

The University of Leeds (School of Medicine).—This University grants the degrees of M.B. and Ch.B., and in association with the Universities of Liverpool, Manchester, and Sheffield, holds a Matriculation examination. Clinical instruction is given in the General Infirmary, which contains 480 beds, and is amply provided with special departments. Students of the University also have access for instruction to the Leeds Public Dispensary, the City Fever Hospitals, the Hospital for Women and Children, the Leeds Maternity Home, and the West Riding Asylum at Wakefield. The School of Medicine, which is particularly well equipped in every way, is separated from the Infirmary by the width of a street only, an arrangement which facilitates attendance at both institutions.

University of Durham.—For students who intend to graduate at the Durham University it is necessary that one of the five years of professional education should be spent in attendance at the College of Medicine, Newcastle-upon-Tyne. During the year so spent the student must attend the medical and surgical practice and clinical lectures at the Royal Victoria Infirmary, which contains over 400 beds. No residence at Durham is necessary. The remaining four years of the curriculum may be spent at Newcastle-upon-Tyne or at one or more of the recognised medical schools. A new wing has been added to the College of Medicine at Newcastle-upon-Tyne to accommodate the departments of physiology and bacteriology. It also contains a students' gymnasium and a set of students' union rooms. The New Royal Victoria Infirmary was opened by H.M. the King in 1906. In the new Infirmary adequate accommodation will be provided for the study of the various special subjects in addition to the ordinary clinical work. The composition fee for the complete course of lectures is 72 guineas, and for the medical and surgical practice of the hospital 25 guineas. There are four professional examinations for the M.B., B.S. degrees. Fees, £25. Address, Dr. Robert Howden, The College of Medicine, Newcastle-upon-Tyne.

The Victoria University of Manchester (Faculty of Medicine).—The medical department of the University is particularly well provided with facilities for instruction in all the courses for degrees and the professional qualification and for teaching the preliminary subjects—namely,

anatomy, physiology, pathology, and materia medica. Clinical instruction is provided at the Manchester Royal Infirmary, which contains 592 beds, and also has large out-patient and casualty departments. Associated with the Infirmary are a Convalescent Hospital at Cheadle, containing 136 beds, and the Royal Lunatic Hospital, accommodating 430 patients. Clinical instruction in gynaecology is also given at St. Mary's Hospital. Women students are admitted to the practice of the Infirmary on the same terms as men.

The University of Liverpool (Faculty of Medicine).—The University grants degrees in medicine (M.B.; M.D.) and in surgery (Ch.B.; Ch.M.). Candidates for degrees are required to pass the Matriculation examination or an equivalent. Students may study in the University for the degrees or for the examinations of other licensing bodies. The laboratories are modern and very well equipped, and the facilities for instruction are most complete. Courses of instruction in tropical diseases can be obtained at the Liverpool School of Tropical Medicine. Fellowships, scholarships, and prizes of over £1,000 are awarded annually, in addition to entrance scholarships. The Clinical School of the University now consists of four general hospitals—the Royal Infirmary, the David Lewis Northern Hospital, the Royal Southern Hospital, and the Stanley Hospital; and of five special hospitals—the Eye and Ear Infirmary, the Hospital for Women, the Infirmary for Children, St. Paul's Eye and Ear Hospital, and St. George's Hospital for Skin Diseases. These hospitals contain in all a total of 1,127 beds. The organisation of these hospitals to form one teaching institution provides the medical student and the medical practitioner with a field for clinical education and study which is unrivalled in extent in the United Kingdom.

The University of Sheffield (Faculty of Medicine).—The degrees of the University, M.B., Ch.B., M.D., Ch.M., and the Diploma in Public Health, are open to men and women alike. A candidate for the degrees of M.B., Ch.B., shall produce certificates that he will have attained the age of 21 years on the day of graduation; that he has pursued the courses of study required by the University Regulations during a period of not less than five years subsequently to the date of his registration as a medical student by the General Medical Council, three of such years at least having been passed in the University, and one year at least having been passed in the University subsequently to the date of passing the First Examination. The University is within easy reach of the various hospitals with which it is connected for clinical purposes. These are as follows: The Royal Infirmary, contains 255 beds; the Royal Hospital, with 172 beds; the Jessop Hospital for Diseases of Women, with eighty beds; also a Maternity Department, with over 250 in-patients per annum, and over 700 out-patient cases attended. Special courses on fevers are held at the City Fever Hospitals (547 beds), and on Mental Diseases at the South Yorkshire Asylum (1,610 beds). The Composition Fee of £80 is payable in three instalments; it does not include medical and surgical hospital practice, clinical lectures, practical instruction in mental diseases, diseases of women, and infectious diseases. Composition fee for Medical and Surgical Hospital Practice for the full period required by the Examining Boards, if paid in one sum at commencement of Hospital Practice, £42. The University of Sheffield offers many valuable scholarships and prizes to students in the faculty of medicine.

University of Bristol (Faculty of Medicine).—The courses given at the University and at the allied hospitals, which

contain over 600 beds, provide full instruction for the Degree and Diploma Examinations in Medicine and Dentistry and for the Diplomas in Public Health. There is a Hall of Residence for women students. An Entrance Scholarship of the value of £75 will be offered for competition in October next.

SCOTLAND.

The Carnegie Trust and the Payment of Class Fees.—This is a fund to provide under certain regulations eligible students with all or a portion of the class fees of the curriculum. Applicants must be over sixteen years of age, and of Scottish birth or extraction. Forms of application are to be obtained from the Secretary, Carnegie Trust for the Universities of Scotland, 22 Hanover Street, Edinburgh.

University of Edinburgh.—Four degrees in medicine and surgery are conferred by the University, namely, Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The degree of Ch.B. is not conferred on any person who does not at the same time obtain the degree of M.B., and the degree of M.B. is not conferred on any person who does not at the same time obtain the degree of Ch.B. A University diploma is granted in Tropical Medicine and Hygiene (D.T.M. and H.), and a University certificate is granted in Diseases of Tropical Climates.

To obtain the Edinburgh medical degrees it is necessary to pass the preliminary examination or its recognised equivalent, and to pass four professional examinations. The first is in botany, zoology, physics, and chemistry; the second in anatomy and physiology; the third in pathology, materia medica, and therapeutics; and the final in surgery, clinical surgery, medicine, clinical medicine, midwifery, clinical gynaecology, forensic medicine, and public health. In order to obtain the M.B., Ch.B. degrees, it is necessary to spend at least two of the five years of medical study in the University of Edinburgh. Clinical instruction is given in the Royal Infirmary, which contains nearly 900 beds; Royal Hospital for Sick Children, with 120 beds; Maternity Hospital, with 40 beds available for clinical instruction; City Fever Hospital, with 600 beds, and the Royal Morningside Asylum, with 500 beds. The total number of beds available for the clinical instruction of students of the University is 2,120. The fees for the four professional examinations amount to £23 2s. Communications should be addressed to the Dean of the Medical Faculty, University New Buildings, Edinburgh, and letters respecting the preliminary examination to Mr. James Dowie, The University, Edinburgh.

School of Medicine of the Royal Colleges, Edinburgh.—This School of Medicine is constituted by an association of lecturers who lecture in several buildings near the Royal Infirmary. The lecturers are recognised or licensed by the Royal Colleges of Surgeons and Physicians, and also by the University. The teaching is similar to that of the Scottish Universities, and the students receive similar certificates at the close of each session. The lectures qualify for the University of Edinburgh and other Universities; the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin; the Faculty of Physicians and Surgeons of Glasgow, and the other Medical Boards. The whole education required for graduation at the University of London may be taken in this school. The anatomy rooms and laboratories open on October 1, and the lectures begin on the same date. The facilities for clinical instruction are similar to those provided for the University, and there

are special classes for women. Full particulars and copy of the calendar of the school may be had gratis from the Dean of the School, 11 Bristo Place, Edinburgh.

School of Medicine for Women, Edinburgh.—Precisely the same facilities for medical study are given as to male students in the School of Medicine, Edinburgh. Regulations, fees, and arrangements are the same. The lecturers are recognised by the University of Edinburgh as giving courses admitting to the degrees of M.B., Ch.B. Clinical instruction is given in the Royal Infirmary and other hospitals mentioned above. The benefit of the Carnegie Trust is open to students of the college. Most of the classes are held at Surgeons' Hall. A sitting is provided for the students. The office of the Dean of the School is also at Surgeons' Hall.

University of Glasgow.—The whole course of study for the M.B., Ch.B., can be passed in the Medical School of the University. The regulations are similar to those given above for Edinburgh. Clinical instruction is given at the Western Infirmary, which contains about 600 beds, and also at the Lunatic Asylum, the Eye Infirmary, the Maternity Hospital, the City Fever Hospitals, and various other hospitals. The cost of the course, including matriculation, fees for classes, for hospital attendance, and for professional examinations, amounts to about £150.

Queen Margaret College, Glasgow (the Women's Department of the University).—This is an integral part of the University of Glasgow. The courses, regulations, and fees are the same as for men. The instruction is given by University professors and lecturers appointed by the University Court. The college provides a separate building, with class-rooms, laboratories, library, and other teaching appliances. The women have all the rights and privileges of the University students, and do their clinical work in the Royal Infirmary, where special wards are reserved for their use, and in other hospitals.

Anderson's College Medical School, Glasgow.—The college, at which a full medical curriculum can be obtained, is situated in Dumbarton Road, close to the Western Infirmary and within four minutes' walk of the University. Degrees and diplomas: Certificates of attendance on the lectures are accepted by the Universities of London and Durham, by the Royal University of Ireland, by the Universities of Glasgow, Edinburgh, etc., under conditions stated in the calendars, and by all the Royal Colleges and licensing boards in the United Kingdom. The public health course qualifies for the Scottish Licensing Board, the Irish Colleges, and the University of Cambridge. The Carnegie Trust extends its benefactions to students of Anderson's College. Particulars may be obtained from W. S. McCormick, LL.D., the Carnegie Trust Offices, Edinburgh. A calendar will be sent on receipt of a postcard by the Secretary to the Medical Faculty, Anderson's College Medical School, Glasgow, W.

St. Mungo's College: the Medical School of the Glasgow Royal Infirmary.—The college buildings are situated within the grounds of the infirmary, and are provided with class-room and laboratory accommodation for several hundred students. Students receive their clinical instruction in the wards of the infirmary, which contains over 600 beds. The college provides a complete medical curriculum, and the classes qualify for the diplomas of the English, Scottish, and Irish Conjoint Boards, and under certain conditions for the various Universities. Students who have fulfilled the conditions of the Carnegie Trust

are eligible for the benefits of this Trust during the whole of their studies at St. Mungo's College. The classes at St. Mungo's College are open to male and female students equally. Students entering for the dental diploma can take out almost all their classes at St. Mungo's College. There is a special department of public health, attendance on which qualifies for the Conjoint Boards and the Universities of Oxford and Cambridge. The inclusive fees for the whole medical curriculum amount to about £65.

University of Aberdeen.—The regulations are practically the same as those of the other Scottish Universities. Clinical instruction is obtained at the Royal Infirmary, which contains 250 beds, in the Sick Children's Hospital, and several other institutions, including the Royal Lunatic Asylum and the City Fever Hospital. At least two of the five years of study and at least eight of sixteen specified subjects must be spent or taken in the University. The remaining three years may be spent and the remaining subjects taken in any University of the United Kingdom, or in any Indian, Colonial, or foreign University, recognised for the purpose by the University Court, or in recognised Medical Schools or under recognised teachers. There are four professional examinations, and the total fees are £23 2s. Address, Mr. D. R. Thom, M.A., Secretary, The University, Aberdeen.

University of St. Andrews.—The conditions at this University are the same as at Aberdeen. Medical students have the privilege of studying at the University College of Dundee, as far as the courses provided there permit, and full particulars respecting the curriculum and examinations may be obtained from Professor Kynoch, Dean of the Faculty of Medicine, University College, Dundee. Clinical instruction is given at the Dundee Royal Infirmary, which has 400 beds, at the Dundee Eye Institution, the King's Cross Fever Hospital, and the Dundee District Asylum.

IRELAND.

University of Dublin (Trinity College).—All students in the School of Physics must pass a matriculation examination. This may be either the public entrance of Trinity College or a special medical preliminary, or, for extern students, an examination recognised by the General Medical Council. No student can be admitted for the winter course after November 25. Candidates for the degrees in Medicine (M.B.), Surgery (B.Ch.), and Midwifery (B.A.O.) must be of B.A. standing and must be for at least five academic years on the books of the Medical School, reckoned from the date of matriculation. The Arts course may be concurrent with the medical course, and the B.A. degree need not be taken before the final medical examinations, but the medical degrees are not conferred without the Arts degree.

Royal University of Ireland.—The regulations of this University, until the Irish Universities Act becomes fully operative, are as follows:—Candidates for any degree in this University must have passed either the Matriculation examination or the Senior Grade examination of the Board of Intermediate Education for Ireland in the subjects prescribed for the Matriculation examination of this University. Candidates can only claim exemption from the Matriculation examination of this University by applying for such exemption in the same year in which they shall have passed the aforesaid examination. Students from other universities and colleges are included in this rule. The following degrees, etc., are conferred by the University in the Faculty of Medicine:—Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, Master of Surgery,

Bachelor of Obstetrics and Master of Obstetrics; a special diploma in Public Health; and a special diploma in Mental Disease.

Royal College of Surgeons in Ireland (the Schools of Surgery).—These schools are attached by charter to the Royal College of Surgeons in Ireland. They are carried on within the college buildings, and are specially subject to the supervision and control of the Council, which is empowered to appoint and remove the professors, and to regulate the methods of teaching pursued. The buildings have been reconstructed, the capacity of the dissecting-room nearly trebled, and special pathological, bacteriological, public health, chemical, and pharmaceutical laboratories fitted with the most approved appliances, in order that students may have the advantage of the most modern methods of instruction. There are special rooms set apart for lady students. The medical students' guide will be forwarded post free on application to the Registrar, Royal College of Surgeons, Dublin.

The Queen's University of Belfast.—This University provides all the classes required for a complete medical curriculum. The University contains laboratories in connection with the departments of biology, chemistry, physiology, pathology, anatomy, physics and materia medica. Women are eligible as students. Clinical instruction is given at the Royal Victoria Hospital, which was rebuilt a few years ago and has 300 beds, and at the Mater Infirmorum Hospital, which has 150 beds. Other hospitals open to the students of the University are: The Maternity Hospital, the Ulster Hospital for Women and Children, the Hospital for Sick Children, the Ophthalmic Hospital, the Benn Ulster Eye, Ear, and Throat Hospital, the Union Infirmary and Fever Hospital, the Fever Hospital, Purdysburn, and the District Lunatic Asylum. The cost of the curriculum intended for students proceeding to the degrees of the Queen's University of Belfast is, approximately, £104. This includes examination fees and a perpetual ticket for attendance at the Royal Victoria Hospital or the Mater Infirmorum Hospital, but not fees for the special hospitals. The course for the Conjoint Board costs about the same amount. A pamphlet containing full information regarding the new regulations for courses, fees, etc., can be had free of cost on application to the Registrar, Queen's University, Belfast.

University College, Cork.—Students can attend courses which meet the requirements of the Royal University of Ireland, the Conjoint Boards of London, Edinburgh, or Dublin, and other examining bodies. Clinical instruction is given at the North and South Infirmaries, each of which contains 100 beds, and at other hospitals. The college is a constituent college of the National University of Ireland, and will in future hold its own examinations in all subjects required for the degrees of that University. Further information can be had on application to the Registrar, University College, Cork.

The Medical School of the Catholic University, Ireland, Dublin.—Founded in 1855, it is now the largest medical school in Ireland. It prepares students specially for the examinations of the Royal University and the Conjoint Colleges of Ireland and Edinburgh, but its lectures and practical courses are recognised by all the licensing bodies in Great Britain and Ireland. In addition to the ordinary medical examinations it prepares students for the D.P.H. and for the various higher University examinations in pathology, physiology, chemistry, etc. Six exhibitions and numerous gold and silver medals are offered annually for competition.

POST-GRADUATE MEDICAL STUDY.

GRADUATE STUDY ABROAD.

ON more than one occasion we have laid stress in the columns of *THE HOSPITAL*, on the importance, for medical practitioners, of becoming acquainted with the diverse views and opinions held by foreign colleagues, and of knowing something of the various methods of treatment and diagnosis adopted abroad. Such acquaintance and such knowledge may be gained by the study of foreign professional journals, monographs, and papers; and nowadays, when what is best and most useful is generally to be found translated into English, it is not difficult, even for those who are unacquainted with any language but their own to master, at least superficially, the principles of new methods of treatment emanating from Continental schools. To instance one example, the Bier method of treatment is now sufficiently well known in England to make it possible for a practitioner to obtain a working knowledge of its application without being obliged to leave England and study its working at Bonn or Berlin. Again, the specific reactions with tuberculin attenuations which go by the name of Calmette and Von Pirquet are equally well known: they are being tried and studied in England at nearly every hospital. But for those who wish to gain not merely a cursory insight into foreign methods but a real knowledge of what is best and most worthy of imitation in the systems in vogue in Continental schools a visit to these schools is of far greater real educative value than is the mere reading of reports about what is being done there. Once more to instance an example, however much may be written about the Bier method of treatment the graduate will learn its essentials far more quickly and far better by a few attendances at the *Königliche Chirurgische Klinik* in the *Ziegelstrasse* Berlin, where Professor Klapp, Professor Bier's first assistant, personally supervises the treatment, than by reading all that has been written on the subject by enthusiastic supporters and as vehement opponents.

THE ADVANTAGES OF GRADUATE STUDY ABROAD.

To the graduate who desires to improve his knowledge and enlarge his purview, there is nothing better than a course of study abroad. No stress need here be laid upon the pleasures concomitant to such peregrinations in pursuit of knowledge. Everyone who has spent a year or more of his time in visiting continental clinics knows how many friends he has gained during his wanderings, for the *Studienreise* always brings the student into touch with men whom he learns to respect, to admire, and to love. It is an interesting discussion this: how much more conducive to real friendship is this intercourse between graduate student and graduate teacher than between undergraduate and undergraduate lecturer. Only in rare cases is the latter the means of framing a lifelong friendship and real attachment between the teacher and the taught. Otherwise is the case with the graduate student,

for reasons that are obvious. He approaches his teacher on a more or less equal footing as a man; the raised level is made by superior skill and experience, both of which are his to acquire. Where tastes are mutually in agreement, he finds a common platform for extra professional discussion, and in matters of purely professional interest he may realise that the acquaintance he has made is on a more solid, a more equitable basis than when he became familiar with his old hospital teacher.

A LIBERALISING FACTOR.

But it is not the personal element, however large and valuable a factor that may be, that counts in estimating the importance of graduate study abroad. There is further the general advantages it offers the student in broadening his mind liberalising his ideas, expanding his thoughts, strengthening his opinions. He becomes a "studied man" in the true sense of the term. Obviously the man who has a practical acquaintance with three methods is better able to judge the merits of one than he who is unfamiliar with any except his own pet method which as a student he was taught in the schools. The one school medical man is apt to be biased, to be truly insular in his prejudices and his likes. The travelled graduate on the other hand, if he has made good use of his opportunities, is able to judge with discrimination and to compare with tact. His experiences among his foreign colleagues have taught him that there are more Meccas than one, and that his Koran does not hold the only true script of salvation.

RECENT AND FUTURE DEVELOPMENTS.

In preceding issues of *THE HOSPITAL* we have given in detail such information as may be of use in helping the graduate student who is desirous of going abroad for purposes of study, to make his choice, of hospital, clinic, or town. It is, therefore, unnecessary to give these details here; for those who wish further information on the subject we refer to past issues of this paper. It is our intention to devote special columns to the graduate student and his work, and to give from time to time articles of a helpful and informative character. Meanwhile it is worth noting that great things are promising in the field. The present International Congress of Medicine now sitting at Budapest will discuss the question of the internationalising of graduate study, and it is hoped that a standing central committee and a bureau may be formed to supply graduate students with all the information they require. In the meantime *THE HOSPITAL* will be pleased to supply all information to English graduates, while Professor Kuttner of the excellent Committee of the Kaiserin Friedrich Haus in Berlin, will gladly give information regarding courses in Germany and Austria, and the Continent generally, to those who wish to travel farther afield in search of knowledge.

LONDON POST-GRADUATE INSTITUTIONS.

WEST LONDON POST-GRADUATE COLLEGE.

The West London Hospital, Hammersmith, was the first of the general hospitals in London to reserve its practice strictly for qualified men, and to establish a post-graduate College as an integral part of its constitution. Post-graduate instruction has been given at the hospital since the year 1893, and over 1,477 medical men from all parts of the world have attended the classes up to December 31, 1908. Of these 413 have been officers in the Naval, Army and Indian Medical Services, and 367 others have come from the Colonies and foreign countries. The hospital itself contains 160 beds, and the advantages of the direct connection of the College with the wards and out-patient work are obvious. The hospital is recognised by the Royal College of Surgeons as an institution where candidates (who need not be members) for the Fellowship can spend the necessary year of study after obtaining a registrable qualification, while the College and hospital are also recognised by the naval and military authorities as regards study leave. The hospital is authorised by the University of London to give certificates of post-graduate study for the M.D. and M.S. degrees.

Members of the College may also accompany the resident staff on their visit to the wards, and so have opportunities of refreshing and extending their knowledge of clinical methods. Operations are performed daily, at 2.30 p.m. Post-graduates are allowed to stand near the table and can see the operations perfectly. The surgeons often avail themselves of the assistance of post-graduates at operations. In the theatre post-graduates may, under the direct supervision of the anaesthetists of the staff, administer anaesthetics in major operations.

The out-patient departments necessarily resemble in their main features those of other general hospitals, and the staff are always alert to discover, and, when found, to demonstrate, any cases of exceptional interest, or, what is of equal importance, any points of special interest found in cases of the more common diseases. During the sessions lectures are given daily, except Saturdays, at 5 p.m., on practical medicine and surgery in all their branches. There are also short courses on tropical diseases, and on mental diseases by men who have made their mark in those subjects. These lectures are quite distinct from the clinical demonstrations in the wards by the physicians and surgeons, and may be attended without additional fee.

Small classes are formed, when required, in connection with diseases of special regions, such as eye, throat, skin, etc.; for the clinical examination of blood and urine; in bacteriology and medical microscopy generally; in applied anatomy, administration of anaesthetics, intestinal surgery, cystoscopy, x-ray work, etc. For these classes, each of which is strictly limited to a small number, additional fees are required, as they are practically individual and tutorial. The ordinary fee for membership covers attendance at all general lectures and at all the routine practice of the hospital, whether in the general or special wards or departments. Autopsies can, of course, be attended. Arrangements can be made through the College authorities for special coaching should it be desired.

Rooms are provided for members where they may read, write, and smoke, and consult books of reference; tea can be obtained in the reading-room; lockers are provided at a small rent for those who wish to keep books or such articles at the College. The medical library of the West London Medico-Chirurgical Society is housed in the College, and post-graduates have the use of the books and periodicals. The hospital is very accessible. Good lodgings are

obtainable in the neighbourhood, a list of addresses being kept by the Secretary of the College.

Members may join for any period from one week upwards, the fees ranging from one guinea to £30. Some few years ago it was considered expedient to increase the fee for life membership, and this enhancement was carried out and remains in force without any resulting diminution of membership.

THE LONDON POLYCLINIC.

The Medical Graduates' College and Polyclinic has now a well-recognised position among the medical educational organisations of the metropolis. Its object is to provide opportunities for clinical and practical study for those who have already gained a position on the medical register. From the outset two principles have been recognised as essential to a large and broad scheme of post-graduation study. First, that such a scheme should be entirely separate and distinct from the ordinary educational course of the medical student. Secondly, that the teaching should not be confined to the staff of any individual hospital, but should include capable and distinguished representatives of all schools. Hence, at the Polyclinic, the needs of the practitioner receive full consideration, and the teaching in a very special manner represents the work of many of the best-known physicians and surgeons in the metropolis.

The afternoon clinics are conducted daily, and offer valuable opportunities. Medicine, surgery, and each of the more special branches of practice, has its appropriate day. Selected cases are demonstrated and made the subject of clinical comment, and opportunities for personal examination by those attending the clinique are offered. In this way, and in a comparatively short period of time, the practitioner is able to undertake a large quantity of interesting and instructive clinical material under the direction of teachers specially qualified in each of the various departments. Indeed, it is difficult to imagine any scheme more suitable for those who are anxious to increase their clinical experience both in general and special work. On four days of each week there is also a lecture by a teacher from a provincial or a metropolitan school. In these lectures the practical note is maintained throughout.

With a view to render these opportunities accessible to all, the annual subscription, which includes admission to all clinics and lectures and also the use of the library and museum, has been fixed at one guinea. In addition, the *Polyclinic Journal* is issued monthly, and is sent free to all subscribers; and in the College laboratory specimens are examined and reported on for small fees. Another part of the Polyclinic scheme, and one of great importance, is the provision of "practical classes" in the more recent methods of clinical investigation. Included in this division, instruction is provided in the use of the ophthalmoscope, laryngoscope, otoscope, and other specialised clinical instruments; in the clinical examination of the blood, sputa, urine, etc.; in the use of the x-rays; and in practical gynaecology. In each class the numbers are limited. A special vacation course of these practical classes is to commence on Monday, September 13, and is completed by October 1.

Tutorial classes for practitioners reading for the higher examinations have recently been instituted, and have proved most successful. Particulars as to fees, hours, etc., can be obtained upon application to the Medical Superintendent, 22 Chenies Street, Gower Street, W.C.

The success already achieved by the Polyclinic is a considerable one, and it appears to have a future of still greater usefulness before it.

THE LONDON SCHOOL OF CLINICAL MEDICINE (POST-GRADUATE).

THE SEAMEN'S HOSPITAL, GREENWICH.

The wise and enlightened policy followed by the Board of Management of the Seamen's Hospital Society in deciding to render available for clinical post-graduate study the wards, theatres, etc., of their parent hospital at Greenwich, as they had already thrown open their branch hospital at the Albert Dock for the study of tropical diseases, has already fully justified itself by results. It has proved that in addition to the considerable facilities already afforded for post-graduate study in London, there existed a demand for opportunities of clinical investigation and teaching untrammelled by the presence of undergraduates, greater than that already supplied by the hospitals engaged in this special work.

Since the doors of this hospital were thrown open to graduate students in 1906 some hundreds of men have passed through courses of instruction within its wards—men drawn from all parts of the world, from private practice and from the medical services. The greater part of the clinical teaching of this School is given at the Seamen's Hospital, Greenwich, but in addition, for the purpose of making the curriculum more comprehensive, the Royal Waterloo Hospital for Children and Women, the Bethlem Hospital for Mental Diseases, and the York Road Lying-in Hospital have been affiliated for teaching purposes; while recently the authorities of the Royal Eye Hospital, Southwark, have thrown open their doors to students from the School of Clinical Medicine under specially advantageous terms of preference. These hospitals are all situated on the south side of the Thames, and are linked to one another by tram and rail, so that post-graduates attending the services of the new School are enabled to take out courses of instruction in every department of medicine and surgery. The certificates of the School are recognised by the Admiralty, the War Office, the Colonial Office, the University of London, and other educational bodies.

The *Dreadnought* Hospital, which is the centre of the organisation, is situated at Greenwich, close to both railway stations, and within thirty to forty minutes' reach of London by rail or tram. The hospital contains 250 beds, and these are continuously occupied by cases of wide and varying clinical interest. The admissions to the *Dreadnought* Hospital differ from those at most other hospitals, in that cases of tuberculosis and venereal disorder are

admitted. The wards are mostly small, many of them containing no more than three beds. There are, therefore, unusual opportunities for the individual examination of cases.

The out-patient department has been reorganised and equipped with the latest modern requirements. Besides the ordinary medical and surgical consulting-rooms, it provides special departments for diseases of the eye, diseases of the skin, and diseases of the ear, throat, and nose. There is a large and admirably-arranged operating theatre for in-patients, and a smaller one in the out-patient department. There are also two laboratories, pathological museum, and post-mortem rooms, where pathology and operative surgery are taught. In the pathological department arrangements have been made whereby investigations of all sorts—chemical, microscopical, biological, etc.—are undertaken at moderate fees. For the purposes of the School there are lecture rooms and a library, while the comfort of those who attend the classes has been kept in view by the provision of comfortable reading and smoking rooms. Men engaged in practice in the neighbourhood of the hospital have been invited to join the School as associates at a nominal fee, and a considerable number have already availed themselves of the privilege. By this plan it is possible for those within reach to visit the hospital and attend the clinics when it is convenient for them to do so—a most excellent arrangement for busy men.

NORTH-EAST LONDON POST-GRADUATE COLLEGE.

This School, which is in connection with the Prince of Wales's General Hospital, Tottenham, N., is recognised by the University of London, the Admiralty, and the India Office as a place of post-graduate study. Opportunities are here afforded for attending demonstrations on various branches of medicine, surgery, and gynaecology, with opportunities for clinical instruction in diseases of the eye, ear, throat, nose, skin, and in fevers, diseases of children, psychological medicine, anaesthetics, x-rays, bacteriology, and dentistry. Special classes with a limited attendance have been arranged for these and other subjects. The fee for a three-months' course in any single department is one guinea, or three guineas admits for a similar term to the whole practice of the hospital. A perpetual ticket costs five guineas. Additional information, with syllabus of lectures and special classes, from the Dean, Dr. A. J. Whiting, 142 Harley Street, W.

OPPORTUNITIES FOR GRADUATE STUDY IN SPECIAL HOSPITALS.

THE LONDON POST-GRADUATE ASSOCIATION.

The London Post-Graduate Association issues tickets which admit to the clinical practice of a number of the leading general and special hospitals in the metropolis. The fee for a term of three months is £10 10s. Applications should be addressed to the Secretary, London Post-Graduate Association, 20 Hanover Square, London, W.

OPHTHALMIC HOSPITALS.

Ophthalmic hospitals are the Central London Ophthalmic Hospital, Gray's Inn Road, W.C.; the Royal London Ophthalmic Hospital, City Road, E.C.; the Royal Eye Hospital, St. George's Circus, S.E.; and the Royal Westminster Ophthalmic Hospital, King William Street, W.C. In each of these the fees charged are very modest, and full particulars can be obtained on application to the Hospital Secretary.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.

Out-patient Department, Leicester Square; In-patient Department, 262 Uxbridge Road, W. This hospital has

a well-equipped in-patient department, with 40 beds. It has a School of Dermatology at 49 Leicester Square, which is conducted by the medical staff of the hospital. During the past year the free course of Chesterfield lectures given by Dr. Morgan Dockrell proved a great success, being well attended by the profession. The next course (free) will commence on Thursday, October 7, at 6 p.m., in the lecture room of the hospital, Leicester Square. The subject of the opening lecture will be "The Danger to the Community of the Beauty Specialist—So-called." The out-patient department has recently been rebuilt at a cost of £10,000, and contains a spacious laboratory, and special electrical department which can be seen in operation every afternoon, except Saturday. Clinical demonstrations are given every Monday (Dr. Morgan Dockrell) at 2 p.m.; Tuesday (Dr. Eddowes), at 2 p.m.; Wednesday (Dr. Savill), at 3 p.m., on selected cases; Thursday (Dr. Hargreaves), at 2 p.m.; and Friday (Mr. Dawson), at 2 p.m. Special courses in the pathology and bacteriology of the skin may be arranged for.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

Qualified medical practitioners and medical students are admitted to the practice of this hospital. Last year (1908) there were 1,865 women delivered in the wards, about two-thirds being primiparae. A large number of the cases were abnormal. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and licensing bodies. Fee for the course of four weeks, £8 8s. Students are accommodated at the new Residential College (5 Cosway Street) opposite the hospital, with which it is in telephonic communication. Terms for residence and full board, 35s. per week.

Arrangements have also been made for the preliminary instruction in midwifery now required by the General Medical Council. This instruction will include:—(1) Practical instruction in the methods of examination of pregnant women; (2) delivery of women in labour under the direct supervision of a medical officer of the hospital; (3) practical instruction in the treatment of the mother and child during the puerperium, including clinics held four times weekly by the visiting medical staff; (4) instruction in the clinical laboratory of the hospital. The fee for this special course for students will be £5 5s. for the course of one month, and the arrangements for the board and residence as above.

THE HOSPITAL FOR WOMEN, SOHO SQUARE, W.

The hospital contains sixty beds. In the out-patient department there were over 4,000 new cases during the past year, the total number of out-patient attendances being 14,820. This large number affords opportunities for examining and studying most of the varieties of diseases peculiar to women. Clinical assistants to the gynaecologists in charge of the out-patient department are appointed for one or more months. They are expected to attend twice weekly in the afternoon. The appointments are open to qualified medical practitioners of either sex. Clinical assistants receive notice of all operations performed within the hospital, and every facility is afforded them in the out-patient department of obtaining experience in diagnosis and treatment and the practical use of instruments. Fee for one month, two guineas; for each subsequent month, two guineas. A certificate is given at the end of a three-months' course. Any further information can be obtained by writing to the Dean at the hospital.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN SQUARE, W.C.

The out-patient practice of this hospital is open without fee from 2.30 P.M. every day (except Thursday and Saturday), when patients are seen by the physicians for out-patients and the assistant physicians. The in-patient practice is only open to those who take out the hospital course. Three courses of lectures and clinical demonstra-

tions will be given in each year. The out-patient hospital practice and lectures are free, but for the hospital course a fee of two guineas for three months or three guineas for six months is charged. The museum is available for the prosecution of special work under the pathologist, for which a separate fee of two guineas for the three months is charged. Apply to the Secretary at the hospital.

CENTRAL LONDON THROAT AND EAR HOSPITAL, GRAY'S INN ROAD, W.C.

Last year 707 in-patients were treated and 10,481 out-patients were seen, involving 51,200 separate attendances. Operation days: In-patients, Tuesday, Wednesday, Thursday, and Friday, at 2 P.M.; and out-patients, Tuesday, Wednesday, Thursday, and Friday, at 9 A.M. Special courses of practical demonstrations are given weekly on Tuesday and Friday, at 4 P.M., during the winter and summer sessions by the members of the staff. They are so arranged that practitioners joining at any time are enabled to complete the group of subjects in a course of six weeks. The fee for this course, with daily attendance at the out-patient department, is three guineas. The fee for general clinical attendance is five guineas for three months and eight guineas for six months. All information can be obtained on application to the Dean, Dr. Wyatt Wingrave, or to Richard Kershaw, Secretary.

HOSPITAL FOR DISEASES OF THE THROAT, GOLDEN SQUARE, LONDON, W.

Clinical instruction in the diagnosis and treatment of disease is given daily in the out-patient department from 2.30 to 5 P.M., on Tuesdays and Fridays from 6.30 to 9 P.M., and on Mondays at 9.30 A.M. Practitioners and medical students are admitted to the practice of the hospital at a fee of five guineas for three months, seven guineas for six months, or ten guineas for perpetual studentship. From amongst the students junior and clinical assistants are appointed periodically. Apply to George W. Badgerow, Hon. Med. Sec.

THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET, W.C.

Courses of lectures by the medical and surgical staff are delivered on Thursday afternoons, at 4 P.M., during the three sessions; these lectures are free to all medical practitioners. For attendance on the other clinical work of the hospital the fees are three guineas for three months' clinical instruction and lectures, or five guineas for a perpetual ticket. Clinical clerks are appointed for three months for a fee of one guinea. The Dean is Dr. Voelcker, from whom all further information can be obtained.

THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, S.W.

A course of lectures free to all medical students and practitioners is given twice a year at this hospital.

GRADUATE STUDY IN SCOTLAND AND IRELAND.

The four Scottish Universities have been but little distinguished in the past for their encouragement of post-graduate study. St. Andrews and Aberdeen concern themselves with the graduate no further than by offering him a degree in Public Health. Beyond this, Glasgow University offers courses in practical bacteriology, pathological histology, physiological chemistry, embryology, and a few of the special departments. Special courses are provided at Anderson's College Medical School and at St. Mungo's College. At the Glasgow Royal Infirmary the members of the hospital staff have now arranged an eighth series of post-graduate classes. These are to be opened on

September 1. The staff of the Royal Infirmary have organised a comprehensive series of practical and clinical classes. The previous courses have already proved very successful, and have been well attended. Apply to Dr. Maxtone Thom, Superintendent of the Royal Infirmary.

In Edinburgh a more elaborate scheme of post-graduate study is available. The University of this city, in addition to teaching the subject of public health, has for some years provided advanced classes in the ordinary medical subjects for senior students and graduates, such as bacteriology, organic chemistry, and embryology, while numerous laboratories attached to the various pro-

fessional chairs have been open for research under certain restrictions. These laboratories are increasing yearly in equipment and efficiency, mainly as a result of the funds derived from Mr. Andrew Carnegie's gift of £2,000,000 to the Scottish Universities. For this purpose, too, a magnificent laboratory has been organised and equipped by the Royal College of Physicians of Edinburgh, where any medical graduate may obtain permission to conduct scientific research.

The University and the Royal Colleges of Edinburgh provide courses for graduates who have obtained their diploma—medical officers home on furlough, practitioners resident in country districts, foreign doctors anxious to study English, and any others who may desire a brief *résumé* of the essentials and recent advances in various special subjects.

The Post-Graduate Course extends this year from Monday, August 30, to Saturday, September 25. It comprises:—1. A General Course, the composite fee for which is five guineas for the four weeks, or three guineas for either the first or second fortnight. 2. A Surgical Course, which includes the following classes: Operative surgery, surgical anatomy, surgical pathology, and x-rays applied to surgery, exclusively reserved for those attending the

Surgical Course, the composite fee for which will be ten guineas. The entries for the Surgical Course will be limited to twenty-five. 3. Special Classes on bacteriology, diseases of the blood, ear and throat, errors of refraction, practical gynaecology, and ophthalmoscopy, the fee for each being one guinea. These classes will be confined to graduates who have entered for the Surgical Course or for the General Course during the corresponding period. Full information and copies of the syllabus may be obtained from the Secretary, Post-Graduate Vacation Course, University New Buildings, Edinburgh.

A three weeks' Post-Graduate Course is given during the summer session at Trinity College, Dublin. The fee is £5 5s. A limited number of the class can live in the College rooms and dine in hall, at a charge of £1 per week. Apply Dr. Alfred Parsons, 27 Lower Fitzwilliam Street, Dublin. A School has been formed to prepare candidates for the Royal Navy, the Royal Army Medical Corps, and the Indian Medical Service. The classes are held twice a year. Apply Dr. C. A. K. Ball, 24 Merrion Square.

At Belfast special summer classes are formed in bacteriology, clinical pathology, neurology, chemical physiology, and during the winter facilities are afforded to graduates to work at these subjects.

THE STUDY OF TROPICAL MEDICINE.

The London School of Tropical Medicine.—It may interest intending applicants for colonial or other posts in the tropics if one gives a short *résumé* of what the course of instruction at the London School of Tropical Medicine consists, and how long it lasts. The sessions extend over three months each, and there are three a year; the Colonial Office requires that men selected for posts in the tropics should attend one such session, and, in addition to showing regularity in attendance, should pass the examination at the end of the course. Failure to do so involves loss of the appointment. Other students may take the examination or not, as they choose, and, if successful, they are entitled to a certificate to that effect. The courses qualify, and are useful preparations, for the Diploma in Tropical Medicine and Hygiene granted by the University of Cambridge. The student is required to attend from 10 to 4 or 5 daily during the three months. The instruction is divided into three headings: (1) the practical work in the laboratory, by far the most important and useful of the three; (2) clinical instruction in the wards and the demonstration of cases; and (3) systematic lectures. Under the first heading the student is trained in hæmatology, protozoology, bacteriology, entomology, helminthology, pathology, and morbid anatomy; the tuition is eminently practical, the student preparing, staining, and mounting his own specimens, so that when he finishes his studies he has in possession a very complete set of specimens, which serve him as standards for the future. Under the

second heading comes the clinical instruction in the wards: the paucity of cases is a serious drawback in this part of the teaching, though, of course, one case studied thoroughly is of much more value than many simply glanced at, but still at the same time this is a real defect, and one which it is difficult to remedy.

The Liverpool School of Tropical Medicine.—This school is carried on in conjunction with the University of Liverpool and the Royal Southern Hospital, for the purposes of research and clinical teaching respectively. A special ward at the hospital has been set apart for the reception and treatment of tropical diseases, and facilities for investigation and study are given in the Johnston Laboratories of the University. The fee for a full course (lasting about three months) is 10 guineas. A hall of residence is attached to the school. A vast amount of research has been accomplished at this school in addition to the ordinary tropical courses for the younger graduate, and any medical man from the tropics who wishes a helping hand in this direction cannot do better than go there.

The University of Edinburgh grants a diploma in tropical medicine and hygiene. The examinations are held in January and July. The fees for the first and any subsequent appearance are: Practical bacteriology, £1 1s.; diseases of tropical climates, £1 1s.; tropical hygiene, £1 1s.; tropical clinical medicine, £1 1s.; total, £4 4s.

THE MEDICAL LIBRARY.

HANDBOOKS FOR SENIOR STUDENTS AND PRACTITIONERS.

MEDICINE.

Allbutt's "System of Medicine." 8 vols., 25s. each, Macmillan and Co. (A new edition, edited by Professor Sir Clifford Allbutt and Dr. H. D. Rolleston, is in course of publication, and several volumes have already appeared. "Allbutt" is deservedly ranked as one of the finest works on medicine, and is especially valuable for practitioners because of the great amount of space given to consideration of treatment and pathology.)

Osler's "System of Medicine." Edited by Osler and McCrae. 7 vols, 24s. each volume. Oxford Medical Publications, 20 Warwick Square, E.C. (The series is not yet complete, but, judging from those that have already appeared, the system is one of the best which it is possible to obtain.)

Allchin's "Manual of Medicine." 5 vols., vols. i. to iv. 7s. 6d., vol. v. 10s. Macmillan and Co. (Shorter but very useful, and particularly good on diseases of special systems.)

Osler's "Practice of Medicine." 1 vol. Appleton. 21s. net. (An admirable text-book of medicine; well written and comprehensive.)

Roberts' "Medicine." 26s. 2 vols. H. K. Lewis, Gower Street. 16s. net. (A useful manual; exceedingly popular)

Taylor's "Medicine." Churchill, 7 Great Marlborough Street. 16s. net. (A useful manual; exceedingly popular with students.)

Savill's "Medicine." 2 vols., 12s. 6d. each. Arnold.

Fagge and Pye Smith's "Medicine." 2 vols. 42s. net. Churchill. (For many years a standard text-book.)

Whitla's "Manual of Medicine." 2 vols. £1 12s. Henry Renshaw. (Sir Wm. Whitla's new work, in dictionary form; concise and practical.)

Carter's "Elements of Practical Medicine." 1 vol. 10s. 6d. H. K. Lewis. (A popular condensation, probably the best of its kind.)

Bury's "Clinical Medicine." 1 vol. 16s. Charles Griffin and Co., Exeter Street, London.

Monro's "Medicine." Baillière, Tindall, and Cox. 1 vol. 15s.

Mitchell Bruce's "Principles of Treatment." 1 vol. 15s. net. Oxford Medical Publications. (Another text-book now becoming a veteran. It is one of the most philosophic works to be found in British medical literature, and will certainly remain a standard work for many years to come.)

SURGERY.

Walsham and Spencer's "Theory and Practice of Surgery," 1 vol. 18s. net. Churchill. (Contains a very large amount of information in comparatively few pages, and for this reason it is a little difficult to read in at all a *dilettante* fashion.)

Rose and Carless' "Manual of Surgery," 1 vol. 21s. net. Baillière, Tindall, and Cox. (This text-book runs neck and neck with the preceding in popular favour. Its *format* is perhaps a little more pleasing than that of its rival.)

Cheyne and Burghard's "Manual of Surgical Treatment," in six parts, 9s. to 18s. each vol. Longmans, Green. (Very complete, thoroughly practical, and in every way satisfactory for a senior student.)

Thomson and Miles' "Manual of Surgery." 2 vols. 10s. 6d. each net. Oxford Medical Publications. (This text-book is a favourite one north of the Tweed, and deservedly: a new edition has appeared this year.)

Jacobson and Steward's "Operations of Surgery," in two volumes. Churchill. 42s. net. (Perhaps the most satisfactory English text-book of operative surgery extant. The fifth edition has now appeared, edited by R. P. Rowlands.)

The most recent and sumptuous book on Operative Surgery is that edited by F. F. Burghard for the Oxford Medical Publications: 4 vols., 36s. each net. This work has only lately been published, and embodies the latest and most up-to-date methods of the distinguished surgeons who have contributed to it.

"A System of Surgery," edited by Sir Frederick Treves, in two volumes, 48s. Cassell and Co. (The work consists of an excellent series of articles by surgeons attached to the various London hospitals, without any attempt to make it encyclopædic. Unfortunately, it has not been re-edited, and is distinctly out of date in many respects; but a few years ago Treves' system held a quite unique position in surgical literature. It may be supplemented by the new edition of Treves' "Manual of Operative Surgery," revised by the author and Mr. J. Hutchinson, jun., which is also published in two volumes by Messrs. Cassell, price 42s.)

Pearce Gould's "Elements of Surgical Diagnosis" is another old favourite with students; it occupies a position from which no more recent work seems capable of ousting it. (Cassell and Co., 9s.).

Surgical Anatomy and Surgical Pathology form the backbone of surgery as a science. But too many students are content to learn only so much as is sufficient to enable them to obtain a minimum examination knowledge. There are several good English text-books on surgical anatomy. One of the best is M'Lachlan's "Applied Anatomy: Surgical, Medical, and Operative," in two volumes, published at Edinburgh by Messrs. E. and S. Livingstone. It is clear, well written, and well illustrated.

Rawling's "Landmarks and Surface Markings of the Human Body," published by H. K. Lewis, 5s. net, is somewhat on the lines of the late Mr. Holden's "Medical and Surgical Landmarks." (Mr. Rawling's book is well illustrated, and has already reached a second edition.)

Sir Frederick Treves' "Surgical Applied Anatomy" has long been a favourite with students. A revised edition has recently been issued by Dr. Arthur Keith, and published by Messrs. Cassell and Co. It is in one volume, well illustrated.

Box and McAdam Eccles' "Clinical Applied Anatomy" (Churchill, 12s. 6d. net) is in many respects an interesting and useful volume, reminding the reader a little of Hilton's "Rest and Pain," which is so well known to every thoughtful student of surgery.

Bowlby's "Surgical Pathology" (Churchill, 10s. 6d. net) contains a large number of drawings, and describes in simple language the various pathological processes with which the student of surgery should be acquainted. It is a useful and popular handbook.

OBSTETRICS AND GYNÆCOLOGY.

Galabin's "Manual of Midwifery" (Churchill, 14s.). A thoroughly popular and useful handbook, practical and concise. Dakin's "Handbook of Midwifery" (18s.) is another favourite with students and practitioners. A new edition of this work is in course of preparation. Eden's "Manual of Midwifery" (Churchill, 12s. 6d. net) is perhaps the best small book for students.

Whitridge Williams' "Text-book of Obstetrics." An excellent work, well illustrated, by an American obstetrician. Deservedly popular in this country.

Herman's "Difficult Labour" (Cassell, 12s. 6d.). An indispensable work. Equally admirable is Herman's "Diseases of Women" (Cassell, 1 vol. 25s.), the standard work on gynæcology. It approaches the subject from the clinical and practical standpoint, and is stamped throughout with the author's personality. Lewers' "Practical Text-book of the Diseases of Women" (Lewis, 10s. 6d.) is a smaller work, popular with students, but less suited to the practitioner. Galabin's "Diseases of Women" (Churchill, 16s. net) is a well-written, useful text-book of gynæcology for students and practitioners. Jellett's "Short Practice of Midwifery" (Churchill, 10s. 6d. net) is a very sound and succinct account of the subject with which it deals.

PATHOLOGY, HYGIENE, Etc.

"Green's Pathology" (1 vol., Renshaw, 18s. net, 10th edition, by W. C. Bosanquet). A reliable introduction to pathology, well illustrated, readable, and up to date. "Martin's Pathology" (15s. net) is also an excellent manual; while Bland-Sutton's "Tumours" (Cassell, 21s.) is an interesting book which all students should read.

Muir and Ritchie's "Manual of Bacteriology" (Henry Frowde and Hodder and Stoughton, 10s. 6d. net). Perhaps the most useful work of its kind. A good introduction to the science of bacteriology.

Emery's "Clinical Bacteriology and Hæmatology" (Lewis, 7s. 6d.) is specially written for practitioners.

Hutchison and Rainey's "Clinical Methods" (Cassell and Co., 10s. 6d.). Almost indispensable to the clinical clerk and the scientific physician. In connection with the subject of clinical methods Dr. Gee's "Auscultation and Percussion" (Oxford Medical Publications, 5s. net) should be mentioned. It is a book which every senior student should procure and keep with him throughout his professional career.

Among useful works on Hygiene and Public Health are Whitelegge and Newman's "Hygiene and Public Health" (Cassell, 7s. 6d.), Hamer's "Manual of Hygiene" (Churchill, 12s. 6d.), Parkes and Kenwood's "Hygiene and Public Health" (12s.), and Ham's "Handbook of Sanitary Law" (2s. 6d.).

The most generally useful and popular handbooks on Forensic Medicine are Dixon Mann's "Forensic Medicine and Toxicology" (21s.), Husband's "Forensic Medicine, Toxicology, and Public Health" (edited by Buchanan and Hope, 10s. 6d. net), and Taylor's large "Principles and Practice of Medical Jurisprudence" (revised by F. J. Smith, 36s. net).

SPECIAL BRANCHES OF MEDICINE AND SURGERY.

Diseases of Children.—Among medical works those of Goodhart and Still (Churchill, 12s. 6d.), Eustace Smith (W. Green and Sons, 21s.), and Cautley (Churchill, 7s. 6d.), should be mentioned.

Ashby and Wright's "Diseases of Children" (Longmans, Green, 21s. net) is convenient because it contains the medical and surgical diseases in a single volume.

Edmund Owen's "Surgical Diseases of Children" (Cassell, 21s.) and D'Arcy Power's "Surgical Diseases of Children and their Treatment by Modern Methods" (Lewis, 10s. 6d.) are well illustrated, and give the views of experienced surgeons who have been attached for many years to large children's hospitals.

Nervous Diseases.—Sir Wm. Gowers' large work (Churchill, 35s.) is the standard authority on this subject. Clutterbuck's "Nerve Diseases" (Scientific Press, Ltd., 3s. net) will be found of service to students. Beevor's "Diseases of the Nervous System" (Lewis, 10s. 6d.) is well adapted to the needs of students preparing for the final examinations.

Insanity.—The manuals of Savage (Cassell, 9s.) and Clouston (Churchill, 14s.) are the most popular, and will be found sufficient for the needs of student and general practitioner.

Diseases of the Chest.—The works of Kingston Fowler, Harris and Beale (Lewis, 10s. 6d.), and Samuel West (Churchill, 2 vols., 36s.) can be recommended.

Diseases of the Skin.—Sir Malcolm Morris' small manual

(Cassell, 10s. 6d.) will be found well suited to the needs of student and practitioner.

Diseases of the Eye.—The handbooks by Jessop (Churchill, 9s. 6d. net), by Swanzy and Werner (Lewis, 12s. 6d.), and by May and Worth are perhaps to-day the most popular students' works on Ophthalmology.

Diseases of the Nose and Throat.—Parker's "Guide" (Arnold, 18s.) is a recent work which is thoroughly clear and practical. Mark Hovell's "Treatise on Diseases of the Ear and Naso-Pharynx" (Churchill) gives a very thorough account of aural surgery, and of affections of the nose and pharynx; while William Lamb's "Guide to the Examination of the Throat, Nose, and Ear" (Baillière, Tindall, and Cox, 5s.) is practical and reliable. In the Oxford Medical Publications are three excellent small manuals, respectively on Diseases of the Ear, by Hunter Tod; on Diseases of the Nose, by E. B. Waggett; and on Diseases of the Larynx, by Harold Barwell. The price of these is 5s. net each.

Abdominal Surgery.—In this large field Lockwood's "Appendicitis" (Macmillan, 10s.) and Treves' classical "Intestinal Obstruction" (Cassell, 10s. 6d.) suggest themselves as being especially valuable; while the works on Diseases of the Liver and Gall-Bladder by Rolleston and by Waring are among the best in the language.

Diseases of the Rectum.—In this specialty the works of Harrison Cripps (Churchill, 10s. 6d. net) and of Goodsall and Miles (Longmans, 7s. 6d.) deserve notice, while, among the smaller books, that by F. C. Wallis can be recommended.

Orthopædic Surgery.—"Deformities: A Treatise on Orthopædic Surgery," by A. H. Tubby (Macmillan, 17s.), is certainly the best and most complete text-book by an English surgeon in this department of surgery. It may be supplemented by "The Surgery of Paralysis," by Tubby and Jones. Mr. Jackson Clarke's "Text-book of Orthopædics" (Cassell, 21s.) can also be recommended.

Anæsthetics.—The large work by Hewitt (Macmillan, 15s. net) will repay careful study; but for the ordinary requirements of students and practitioners Dudley Buxton's volume (Lewis, 7s. 6d.) will be suitable; and those who desire a concise and very practical little handbook cannot do better than obtain Boyle's "Practical Anæsthetics" (Oxford Medical Manuals, 5s. net). Blumfeld's "Anæsthetics" (Baillière, Tindall, and Cox, 2s. 6d.) is also deservedly popular, and another excellent small monograph is that by R. W. Collum in the first volume of Bale, Son, and Daniellson's Medico-Chirurgical Series.

Medical Electricity.—The best book on this subject is that written by Lewis Jones (Lewis, 10s. 6d.).

Diseases of the Heart.—The late Sir Wm. Broadbent's text-book of "Diseases of the Heart" is a monograph which remains a model of what such a work should be. No student should omit to read through this invaluable book. A more abstruse monograph is the recent "Diseases of the Heart," by Dr. Jas. Mackenzie (1 vol., Oxford Medical Publications, 25s. net). This embodies the most up-to-date theories on the subject; much of it is the original research of the author.

HOSPITALS AND THE RATES.

On August 31, Mr. Jeremiah MacVeagh, M.P., introduced into the House of Commons a Bill empowering local authorities to levy a rate not exceeding threepence in the pound towards the erection and maintenance of hospitals within their area. It is stated that the intention of the promoter is no more than to get the Bill printed this session, the object being to have the matter thoroughly discussed out

of doors. Members of all parties are included among those who have promised to "back" the Bill with this end in view.

As this proposal is quite evidently the thin end of a wedge whose driving home means the complete municipalisation of all hospitals, we shall defer comment until next week.

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CANCER RESEARCH IN THE REGISTRAR'S ROOM.

CANCER research promises to become one of the fashionable studies of the rising generation of medical men. It is one of the most promising signs of progress that fashion should have fixed on so fine and useful an object for its favourite, although it may safely be premised that the good that will result from such research will not be due to the fact that fashion has had anything whatever to do with it. Nevertheless it is gratifying to note that yearly a larger percentage of recently qualified men devote themselves to the elucidation of this problem. Twenty years ago a few enthusiasts occupied the field where there are now dozens of patient observers and keen pathologists actively at work. This is as it should be, for the more men devote their energies to the work the greater is the likelihood of something tangible resulting from it. The wider the field is made, and the more diverse are the methods of research, the greater is the probability of ultimate success.

At present the pathological side appears to have put the clinical wholly into the shade. We regret that this should be so, for we are convinced that a great deal may be done by patient clinical investigation. By clinical investigation we understand the widest and fullest interpretation that can be given to the term "bedside work," but it must be remembered that there are branches of clinical work which cannot be readily performed in the ward alongside the patient's bed. One of these branches—one hitherto neglected so far as the cancer problem is concerned—is the statistical side. It is high time that some research student, possessed of a training in dealing with statistics, should sacrifice his pathologico-bacteriological yearnings, and devote a couple of years to a close study of the statistics of cancer. On a small scale much has already been done. One of the finest contributions to the literature of carcinoma mammae, for example, is Finsterer's exceptionally full and able record of all Bilroth's cases and their after history; a masterly piece of work which is by no means so well known to English surgeons as it deserves to be. Another instance, on a still smaller scale, is furnished by Mancrede's article in the current *Annals of Sur-*

gery on "The After Results of Excision of the Scapula in cases of Malignant Disease." From the surgeon's point of view such collected observations are of the utmost importance. From the point of view of the research student they offer a wide field for original investigation. The registrars' bookshelves in all our larger hospitals hold a mass of valuable and interesting statistical material, which should be made more generally available than it is at present. Here are preserved many very valuable records which demand collation, and which should prove most useful to the expert statistician. What is wanted is work somewhat on the lines adopted by Finsterer and Mancrede. Each case should be tabulated, and, where patients are alive, they should be invited to submit themselves to examination by an independent investigator. Individual statistics and reports prepared by operators themselves, who take into account only their own series, and who are inevitably biassed, no matter how wide their outlook or how unprejudiced their observations, in favour of their own cases, can hardly be reckoned equal in value to such independently investigated analyses. The work such as we suggest is by no means easy, and the sacrifice of time and the amount of personal trouble and inconvenience the proper undertaking of it would entail is great enough to scare off all but the most enthusiastic of researchers. Take cancer of the breast, for instance. The largest collection of analysed cases is undoubtedly that of Finsterer, already alluded to, and yet, as everyone acquainted with statistics will readily admit, it is absurd to draw more than vague general conclusions from a summary of only some 700 cases. An investigator capable of undertaking the work in London and the large provincial centres will find records of several thousand cases available for his lists, and the collected results will be of infinitely greater comparative importance. The investigation will take time, and it will entail trouble. For it will mean the careful and laborious tracing of every case to the grave, or to a personal, or at least properly controlled, examination. Cases in which the patients died should be as carefully investigated as cases in which they are still alive, for it is of the

utmost importance to know as fully as possible the percentage of recurrences and the actual mortality after operation. Such an investigation should prove fruitful in surprises. The statistical method is doubtless dry and dusty, but it is a very valuable method when properly used, and there are times when its results can kill a theory with mathematical exactitude. And it is well that theories should be weighed by clinical statistics. In some cases that criterion is the only one that can be usefully applied. But in all cases the statistical method should be patiently and carefully used, and by investigators who have a knowledge of their tools. It is not a matter of mere technique, but of discrimination and

logical reasoning. Every qualified man may be able to do cancer research in the laboratory, but few, we feel convinced, will be able to do it properly in the registrar's room. Nevertheless it is a method of helping towards the solution of the problem which should not be lost sight of, and we cordially hope that in the near future it may be enthusiastically taken up. In this matter Prof. Pearson and his colleagues may well come to the aid of the mere medical man. At any rate no one who undertakes cancer research in the registrar's room on a large scale should neglect to profit by the lessons which the pioneers of eugenics have already taught us.

MEDICAL ADVERTISING IN JAPAN.

WHEN the occidental world awoke five or six years ago to the fact that a new power had arisen in the far East capable of engaging successfully both by land and sea the forces of one of the largest empires of the world, not the least amazing of the facts which emerged was that even down to the army medical service the Japanese were independent of outside assistance. A good many European surgeons in search of military adventure and surgery made their way to Tokio, only to be told that their services were not required, and to wend slowly home again. We may take it that, since the military medical service was thus fully equipped with personnel, the needs of the civil population are probably also fairly well satisfied in the matter of home-bred (and mostly home-educated) practitioners. With this modernisation have entered less desirable products of western therapeutic enterprise, including the advertising quack, the patent medicine, the cure-all nostrum, and other devices by which the ignorant and the credulous have so long been bled by ingenious knaves in Europe and Great Britain. It would appear that the dimensions of these evils have grown to such an extent that the Government of the Mikado, with a praiseworthy concern for the welfare of his subjects, has taken at least the preliminary steps towards the regulation of a part of the evil. We do not gather that so far anything is being undertaken on the lines of the excellent New Zealand legislation against quack advertisements and lying nostrum vendors; but, according to an Ordinance recently published by the Home Department, very stringent rules are to be enforced with regard to the conduct of the medical profession. It is further to be observed that in respect of what shall in the future, and what shall not, be conduct befitting a Japanese doctor, the model which the regulations follow is in the main that set by the General Medical Council of Great Britain. In future no

licensed medical practitioner will be permitted to advertise in Japan details of methods of medical treatment, or the history or success of such methods. Doctors and dentists connected with hospitals or engaging in general practice will not be allowed to advertise any information beyond that indicating their degrees and specialities. In this respect the Ordinance approximates perhaps more to the American idea of what is legitimate; for it is quite common to find in transatlantic journals small rectangular spaces containing the name, address, and telephone number of some practitioner, with an indication of the branch or branches of work in which he claims to be especially adept and instructed.

But after all, in regulating the extent to which qualified men may bring to public notice the fact that the State recognises their special claims to be regarded as trustworthy practitioners of medicine or surgery, the Home Department is dealing with the fringe only of a very large evil. It is something that a start should be made, but to command anything like complete success the much greater question of fraudulent cures and the immorality with which they are advertised in the lay press must be dealt with. To lay down rules for the guidance of the medical profession is much less essential than to protect the public from the unscrupulous and unqualified impostors who bolster the sales of their cure-alls by wanton lies. The Japanese Government is to be congratulated if it has decided to take steps towards the remedy of these evils; and it might well be recommended to study the penalties enacted in New Zealand not only against those who concoct quack nostrums and advertise them with false statements, but also against those who publish them without taking reasonable steps to assure themselves of the genuineness of the advertisements and the reputations of the advertisers.

ANNOTATIONS.

Rate Aid for the Hospitals.

LAST week Mr. J. MacVeagh introduced into the House of Commons the following Bill to empower local authorities to strike a rate in aid of local hospitals:—"Be it enacted by the King's most excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows: (1) From and after the passing of this Act it shall be lawful for any district council, parish council, corporation, board of town commissioners, county council, or other rating authority to strike a rate not exceeding *threepence in the pound* on the valuation towards the erection or maintenance of any hospitals situated within the area of charge. (2) The allocation of any rates so levied shall be subject in England and Wales to the approval of the Local Government Board, in Ireland to the approval of the Local Government Board for Ireland, and in Scotland to the approval of the Local Government Board for Scotland. (3) This Act may be cited as the Hospitals Act, 1909." It is a private Bill, and certainly not of the class which can be passed without discussion or debate. There is, therefore, little chance that it will reach a second reading this session in view of the press of urgent business with which the House of Commons has still to deal. That is, of course, fully understood by its sponsor, who states that his main object in bringing forward the Bill at this late stage is to draw public attention to its terms and to elicit extra mural discussion on the subject with which it deals. The measure is an important and grave step which should be carefully considered by everyone who is interested in institutional matters. We hope to return to its discussion on a future occasion.

The Treatment of Leprosy.

IN an interesting report Dr. Ernest Moon, senior medical officer of the Leper Settlement at Robben Island, devotes some attention to the results of new lines of treatment which have been tried on patients under his charge. In addition to the internal and external use of chaulmoogra oil which has been used in the past year, and under which some of the patients, who take an interest in their case and persevere with the treatment, show an improvement, several of these patients are also taking one-fiftieth of a grain of strychnine twice daily, with benefit to themselves. Three male Europeans and four female Europeans are on Dr. Duque's treatment of Havanna, consisting of liquid extract of red mangrove bark, commencing with 7 c.c. (about two drachms) twice daily after meals, and increased weekly by double doses till 80 c.c. (about 3 ozs.) are reached. They are also having hot baths, about 100 degrees, the last thing at night. The bath water is discoloured with the mangrove. Dr. Moon concludes: "The treatment was commenced in April and May months. I regret I cannot see any improvement in their condition. The medical officer of health for the colony sent some roots which had been given

to him by Mr. J. W. Jagger, M.L.A., consequently called "Jagger's Roots." These when powdered were to be applied locally to the active maculæ in anæsthetic cases. The nature of the roots is unknown to me, but I understand they were given by a friend to Mr. Jagger with a history that they were used by the natives of Rhodesia for the cure of leprosy. They were said to convert active maculæ into white spots. In two cases the extract was tried without any favourable result."

Teething Powders.

EVEN among the educated classes that almost ineradicable maternal instinct to ascribe all and every infantile disorder to some fanciful and often extremely remote cause dies very hard. Among the labouring population it is not surprising therefore that enlightenment should be perceptibly slower still in making headway. Of all the processes which have thus to bear the supposititious burden of creating ills innumerable, that of teething stands easily first in popular imagination, outdistancing vaccination by a great distance. There is probably no single malady that may afflict an infant which is not set down by mothers (and grandmothers) to the occurrence of dentition. Since the eruption of teeth continues more or less regularly from the age of six months to that of two years, it follows that there can never be any moment between those ages when a tooth has not either lately been cut or shown signs of being about to be so. Herein, naturally, lies much of the strength of the superstition in question, for it is nothing less. Since this idea is so universal, it is not surprising that the public should seek remedies for the dangerous epoch of tooth-eruption; and the number of "teething powders" on the market and their ready sale are evidence of the faith with which this delusion is still cherished. If such quack compounds were always harmless, little evil might result beyond the swindling of gullible mothers by unscrupulous nostrum vendors: but unfortunately this is far from being the case. It appears from the reports of two inquests held about the end of August at Southwark that a mother administered a teething powder "to cool the blood" of her infant son, then suffering from diarrhoea. Whether this particular powder contained opium—as many do—or grey powder or calomel—ingredients equally common—does not appear; but the baby became rapidly worse, and died shortly afterwards. Another child, which had been similarly treated, died whilst being taken to Guy's Hospital. The coroner (Dr. Waldo) took occasion to point out that the patent medicine duty stamp on these secret remedies is in no sense a guarantee of their worth. It seems extraordinary that this idea should be so widely diffused, in spite of frequent efforts to expose its absurdity, and in spite of the plain statement to the contrary on the stamp itself; but in fact the semi-literate proletariat do entertain it very widely, and no effort to counteract it is superfluous. He also elicited from medical witnesses the familiar fact that many of these mercurial remedies, when kept long in stock, oxidise slowly into forms which generate corrosive sublimate on entering the stomach.

MEDICAL OPINION AND MOVEMENT.

AT a recent meeting of the Chicago Gynæcological Society Dr. L. E. Frankenthal described a method of obtaining the advantages of Walcher's position without the necessity for one or more special nurses, without discomfort to the patient, and without horrifying any relatives that may be present. He has a harness, constructed of toweling which consists of three parts. By one bandage, which is applied first, the pelvis and abdomen are fixed to the edge of the bed towards which in the lateral position the patient is facing. This broad bandage passes round the lumbar and sacral regions and fixes the pelvis in such a way that the other parts of the harness may produce full extension of the vertebræ. The next applied is a broad band, made with holes for the arms, which bears chiefly on the front of the chest, and is fixed to the opposite side of the bed to the pelvis band. It thus draws backwards the shoulders and extends the dorsal spine. Lastly, the ankles are tied together and to the same side of the bed as the shoulder bandage, with the thighs hyper-extended and the knees flexed. After a little time the extension of the thighs can be increased by gently pushing the knees backwards, at the same time tightening the ankle bandage. Patients do not beg to be released from this contrivance, though three hours is the longest for which continuous application has been ordered. Bodily warmth can be better maintained than in Walcher's position, and there is no œdema of the feet or soft parts. The hyperflexion of the anterior part of the pelvic inlet upon the sacro-coccyx joints is obtained just as effectively as by the Walcher plan, for the approach of the lower sacrum and coccyx to the ilium, and the consequent relaxation of the soft parts, are equally well effected.

A MOST useful form of Treatment of Chronic Constipation, which perhaps is of more frequent application in Germany than elsewhere, is the methodical employment of oil enemata. There are, however, certain objectionable features attached to this procedure, among which may be mentioned the soiling of linen, the necessity of lying down after the operation, the escape of foul-smelling gases due to decomposition of the oil, and in some cases abdominal pain, malaise, and intestinal irritation. Lipowski, in the *Berliner Klinische Wochenschrift*, proposes to overcome these difficulties while at the same time retaining and even increasing the good effects of the oil enema, by substituting for it a mixture of one part of solid with eight of liquid paraffin. Having previously warmed it to a temperature of 100° Fahr., the patient seated at the edge of a chair introduces about seven ounces of the mixture into his rectum by means of a syringe and soft catheter. The paraffin has no irritant action on the intestinal mucous membrane, does not decompose, and has a greater purgative effect than oil. Since it is quickly deposited on the mucous membrane of the bowel in the form of a pomade, and has no ten-

dency to escape from the anus, there is no necessity for the patient to lie down after taking the enema. The author has shown experimentally that resorption of water from the large intestine is much increased in cases of chronic constipation. Oil has the faculty of delaying this resorptive process, and paraffin is even more effective than oil.

ACCIDENTS of Electrical Origin to the Eye are comparatively rare and usually not very severe, but there are three cases on record in which the accidental passage of a strong electric current through the body resulted in the development later of a cataract. A fourth case of this kind has just been published by Terrien. A current of 550 volts passed through the body of a young electrician while he was repairing a machine. Picked up unconscious, he was removed to hospital, where he regained his senses in a couple of hours. His injuries comprised moderately extensive facial burns with some slight conjunctival injection; there was, however, but slight reaction, and both eyes and skin rapidly returned to their normal condition. It was not until three months after the accident that further complications set in, resulting in the formation of a cataract limited at first to the subcortical layers. In the course of six weeks, however, complete blindness ensued from the involvement of the remaining layers of the lens. From the study of this and the three previous cases, the author concludes that cataract appears comparatively late after the accident—i.e. in from six to twelve weeks, and that it may be complete and lead to total blindness in the affected organ; prognosis in this class of accident must therefore be very guarded. The pathology of the condition is obscure, but perhaps the most likely explanation is that the current has mechanical and electrolytic action on the crystallin of the lens. Whatever be the pathological explanation, the injury entails a disturbance of the lens with relaxation of the ligaments which renders subsequent extraction difficult, and the prognosis still more unfavourable.

THE term *Ozœna* is often loosely employed to denote any condition of the nasal passages in which fœtor is the predominant symptom. Lavrand, in the *Journal des Sciences Médicales de Lille*, draws attention to the impropriety of this, and gives a definition of the only condition to which the term should be applied. *Ozœna* is a morbid entity with a very exact symptomatology—namely, a fœtor peculiar to itself, the presence in the nasal passages of dried secretion in the form of adherent grey or green crusts, and lastly total atrophy of the mucous membrane and walls of the cavities. It is thus easily distinguishable from such affections as syphilitic necrosis, suppurative sinusitis, and rhinitis following the presence of foreign bodies, all of which are accompanied by more or less fœtor. As the result of repeated examination of a large number of cases, the author came to the conclusion that the crusts are the result of a secretion coming from the middle

meatus, and on probing this passage he was able to show that, in all cases of true ozæna, a condition of ethmoidal osteitis is present, varying in extent according to the severity of the case, and uni- or bi-lateral according as the ozæna is present on one or both sides. In no case was he able to find disease of any other sinus than the middle one, so that the ethmoid alone is affected. Treatment therefore is purely surgical, and the results of curetting have been most satisfactory in his hands. The old treatment by paraffin, which was supposed to reduce the size of the cavities and so restrict the secretion, must therefore be abandoned, for it is obvious that the increase in size of the sinuses is the result, not the cause, of the disease. The atrophy can be explained by the osteitis producing a neuritis of the trophic nerves in its neighbourhood.

WHILE the effect of the X-rays upon the Cancer Cells of superficial growths is now beyond dispute, it has to be admitted that the penetrating power of the rays for deeper growths does not appear to be very great. Information is scanty as to how deep the rays penetrate and influence the cancer cells, but some light has been thrown on the question by the work of M. E. Bornait-Legueule. He has examined histologically ten cancers of the breast that have been treated previously with the Röntgen rays. He finds that the most marked effect of the rays upon the cancer cells was shown in the superficial layers. To a depth of 10 or 12 millimetres from the skin the neoplastic elements had disappeared, and they were more or less modified though not destroyed, as far as 25 mm. But at a depth of 3 c.m. living cancer cells were found in the midst of others undergoing involution, and this in spite of large doses of the rays. The neoplastic cells appear to be eliminated by means of an intensive phagocytosis, by which the growth becomes invaded and the epitheliomatous lobules encircled. Charged with the cellular debris of the neoplasm the phagocytes disappear and are replaced by a proliferation of connective tissue elements, already demonstrated by Bashford and by Exner. When this development of connective tissue is not much in evidence the disappearance of the neoplastic cells leaves lacunar spaces around the cancer lobules that have resisted the action of the rays. These lacunæ or fissures are of especial interest showing that the x-rays have an elective action upon the cancer cells apart from any vascular changes or connective tissue proliferation.

ACCORDING to the observations of certain authorities, particularly Vyssokovitch, Bacteria circulating in the Blood cannot penetrate healthy kidneys, and so find their way into the Urine. The recent researches, however, of Vincenzi do not confirm this supposition. He worked with a bacillus coli virulent for guinea pigs and rabbits, and he found that the healthy kidneys in these animals were quite permeable to this microbe. He injected 1 to 2 c.c. of bouillon culture of the bacillus coli into the jugular vein, and after two to five hours killed the animals by chloroform. Having ligatured the bladder close to the urethra, he drew it out from

the abdominal cavity, and with aseptic precautions aspirated it. Agar and gelatine cultures were then made from the urine drawn off. Without exception all the cultures gave positive results. The urines showed otherwise no abnormality, neither albumen, epithelial cells nor red corpuscles, and the kidneys examined microscopically were found to be quite healthy. A careful examination of the renal sections showed in some cases a few bacilli in the glomeruli, and some were also detected in Bowman's capsules. It appears therefore from these researches that at least some bacilli are able to pass through the walls of the capillary blood-vessels, without any accompanying appreciable changes in the vessel walls, especially in parts such as the glomeruli of the kidneys where there is a slowing of the blood-stream, and in this way they may pass from the general circulation into the urine.

BY Radioscopic Examination after the administration of bismuth subnitrate, Dr. K. Faber has made some interesting observations on the position of the stomach in the normal subject and in cases of gastropsis. By examining a number of young subjects of both sexes in good health he finds that in males the stomach has the form of a vertical bag or sack, the lower end of which is bent upwards. It lies a little to the left of the middle line and the lower end crosses this line to end in the lower right half of the epigastrium. The greater curvature passes almost vertically down to 1 to 3 c.m. above the umbilicus, where it crosses the middle line, but the extent of this vertical portion forms the chief variation in different subjects. In tall thin males it may extend to the umbilicus or even below, and in females it is much lower than in males. Among 70 female subjects examined, in only two or three cases did the greater curvature lie altogether above the umbilicus. In cases of gastropsis the chief characteristic consists in the length of this descending vertical portion of the stomach which may measure as much as 30 cm., whereas normally it should not exceed about 25 cm. Dr. Faber considers that in women a stomach is to be regarded as abnormal when the lesser curvature reaches to the level of, or below the umbilicus. In man a ptosis of that extent is very rare. On the other hand he finds that clinically a very considerable amount of gastropsis may be present, especially in women, without giving rise to symptoms. He thinks that when symptoms do arise they are due to an accompanying gastritis, or to a loss in neuro-muscular tone. In such cases the condition is naturally aggravated by the ptosis of the organ causing increased difficulty in the evacuation of the stomach contents.

ADOPTING the hypothesis that the cedema of Bright's disease is due to some toxin, Dr. Timofeev has carried out some interesting experiments on dogs to determine the presence and origin of the toxin. An account of the work appears in the *Archives für Experimentale Pathologie und Pharmacologie*. Changes in the lymph flow were observed by establishing a fistula in the thoracic duct. Intravenous injection of normal serum

showed no increase in the lymph flow, and the same result obtained after double nephrectomy. From this the author argued that cedema is not produced by toxic bodies retained from failure of excretion by the kidneys, but that the supposed toxin is probably in the renal cells themselves. Subsequent experiments appear to confirm this. Ligature of a ureter or renal artery of one side produced considerable increase in the lymph flow, and the serum of dogs so treated injected into other dogs proved highly lymphagogenic. The coagulation of the blood and lymph was found also to be retarded. Moreover normal saline injected intravenously into dogs after ligature of the renal artery produced effusions in the serous cavities, pulmonary cedema, and sometimes subcutaneous cedema, whereas no such effects were observed in normal dogs. Dr. Timofeev concludes from these researches that the kidneys themselves form these toxic bodies, which he proposes to term "nephroblastins," and which, in cases of inflammatory changes of the kidney cells, pass into the general circulation and produce the cedemas characteristic of certain forms of renal disease.

A METHOD of Treating Abscesses by Repeated Puncture has been described recently by Ritter in the *Berliner Klinische Wochenschrift*. A trocar and cannula of diameter sufficiently large to ensure the complete evacuation of the pus are introduced into the abscess. The orifice of the opening is then closed with a collodion dressing. On the following day a similar puncture is made through a second opening, and fluid is drawn off which is usually only slightly purulent. Two days later the operation is repeated, when the fluid will be found to be free from pus. Every second day for a couple of weeks the punctures are continued, after which a complete cure is said to result, even in the case of a large abscess. The author first tried his method on cases of mammary abscess, and owing to the success which attended his efforts extended it later to cases of suppurative adenitis, furunculosis, purulent arthritis, and whitlow. In the last-mentioned disease repeated puncture, if instituted sufficiently early, will ensure the preservation of a phalanx, which at first sight seems beyond hope of salvation. From an æsthetic point of view the results of this treatment will no doubt compare favourably with those obtained by the ordinary method of open operation and drainage, in which an ugly scar is apt to remain after the wound has healed. In cases where æsthetic considerations are of secondary importance the new method cannot however be recommended until further trial has conclusively demonstrated that it is as efficacious as that usually employed. The punctures must be extremely painful, especially with trochars of large calibre, and must necessitate repeated anæsthesia.

THE following brief notes on an outbreak of Scarlet Fever seem to be of interest from the point of view of the latency of scarlatinal infection in houses. Dr. W. E. Gladstone, District Health Officer of Dunedin, New Zealand, states that: "In investigating an outbreak of scarlet fever at a cottage in a

country settlement a few miles from Dunedin, I found that seven years ago the mother had contracted scarlet fever. After the patient had recovered, the whole building (three small rooms) was fumigated with sulphur, and new wall-paper was pasted over the old wall-paper. During a recent spell of wet weather the roof of the cottage sprung several leaks, the water loosening some of the wall-paper to such an extent that the father thought it desirable to pull all the paper from the walls. The three children played with the paper, and four days later contracted scarlet fever. The children had not been visiting any family, nor had there been anyone visiting the cottage for some weeks."

OF the many different methods that have been recommended for the Treatment of Chronic Ulcers of the Skin a comparatively new one devised by Dr. M. J. White, consists in the use of equal parts by weight of thymol iodide and dried ferrous sulphate in powder form. The ulcer is first washed with dilute carbolic lotion, all crusts being removed both from the surface and from the borders. It is then gently but carefully dried, and covered with the powder. As soon as the ferrous sulphate produces a burning sensation the excess of powder is blown off, leaving only a thin adherent film which is now covered thickly with zinc ointment, gauze, strips of adhesive plaster, and a bandage. The dressings should be renewed every other day, and excess of the powder should be avoided.

IN the *Gazette des Hôpitaux* attention is drawn by Hallopeau to the advantages of Combining Local with General Antisyphilitic treatment when dealing with cases of Hunterian chancre. The method he advocates is troublesome, both from the point of view of the patient and of the practitioner; but this disadvantage is more than compensated by the possibility of aborting the attack before the onset of secondary symptoms, a result which the author claims to have achieved in a large proportion of his own cases. The chancre is first covered by a pomade containing 30 per cent. crystalline atoxyl, known commercially as diadermine. Round the periphery of the lesion daily injections of 1.5 grs. of atoxyl are given hypodermically. At the same time 15-30 grains of potassium iodide are given each day by the mouth, and intramuscular injections of a mixture containing .3 gr. mercury benzoate, 1 drachm of distilled water, and 5 grs. of glucose or saccharose, are made into the buttock daily. Treatment is continued for six weeks unless the atoxyl gives rise to ocular symptoms, whereupon the local injections are stopped immediately. In some cases, and in all over fifty years of age, Conneyrat's Nectine, a derivation of atoxyl, is substituted for the drug itself. The former is less toxic and more active than atoxyl. The author maintains that these local injections are six times as effective as the general ones in killing the *treponema pallidum*, and, moreover, prevent the advent of adenitis and roseola. Treatment is well borne by most patients, and is successful in proportion as it is undertaken early.

HOSPITAL CLINICS.

SURGICAL TREATMENT OF ACUTE GENERAL PERITONITIS.

By L. A. BIDWELL, F.R.C.S.

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As you are all aware, disease of the vermiform appendix is by far the most common cause of general peritonitis. Appendicitis is accountable for something like 60 per cent. of such cases, while about 20 per cent. are due to perforations of the alimentary canal, 10 per cent. to diseases of the pelvic organs, and the remainder to various causes, such as rupture of an abscess. I intend to devote the greater part of my lecture then, to cases of acute general peritonitis due to appendicitis, but before doing so will refer to some of the other conditions which produce peritonitis.

Perforations of the alimentary tract most commonly occur in the stomach or duodenum. Perforation of the stomach is most frequently seen in the female and that of the duodenum in the male. Perforations may also occur in the colon; this condition is usually described as due to ulcerative colitis, but it really might be called a perforating ulcer, from the tendency of such an ulcer to perforate. In these cases of perforation of the colon the peritonitis has been usually local rather than general, and in only one case was there what could be called general peritonitis. Two other cases of perforation occurred in ulcers of the sigmoid, forming just above a stricture which was due to malignant disease. When stricture results after operations for the removal of growths from the intestine, the distension of the bowel above the stricture is liable to be followed by ulcers in the wall of the gut, and these ulcers sometimes perforate. In one of these two cases the condition was recognised within six hours of the perforation and an operation was performed, the perforation being closed successfully; in the other case no operation was performed. A typhoid ulcer may also perforate. Here the prognosis is very bad. Such a condition is sometimes difficult to recognise because of its occurrence in delirious patients when, of course, the symptom of pain is absent. I have also seen perforated tuberculous ulcers of the intestine which have produced definite general peritonitis. But the most peculiar case of perforation of the bowel was in a patient who was accidentally shot, the shot perforating the rectum and the sigmoid flexure, producing general peritonitis. A symptom always to be looked for in cases of peritonitis due to perforated gut is the presence of free gas in the peritoneal cavity, as shown by diminution of the liver dulness. This symptom is one which is rather liable to lead to mistakes. If we have great distension of the colon we shall have obliteration or diminution of the liver dulness. It is only when there is no distension of the rest of the abdomen that the symptom is a valuable one. It is present in about two-thirds of the cases of perforation of the stomach and duodenum, also in the perforation of typhoid and tuberculous ulcers, and I have found it present in one case of perforation of the colon; but

in the other cases of perforation of the colon and of the sigmoid flexure it was absent. With regard to miscellaneous causes, I have had two or three cases in which general peritonitis has followed perforation or gangrene of the gall-bladder. I have also had a case of general peritonitis caused by rupture of a sub-peritoneal abscess.

I now come to the discussion of symptoms. Pain is practically always present, except in those cases in which perforation occurs during delirium. Usually it is very acute at first, but when a large quantity of pus has formed it becomes much less intense or even disappears entirely. It is remarkable that the patient suffers less pain when the general condition of the peritoneum is in its worst phase. The next symptom is vomiting. This is practically always found, and in a neglected case the vomit is pumped up in large quantities without any effort on the part of the patient. It is bilious in character at first, but afterwards brown-coloured and evil-smelling. It is often described as stercoraceous, but I believe that its misleading appearance is due to partly digested blood. Rather an interesting case came to the West London Hospital about six months ago with a perforation of a duodenal ulcer. There was a history of an old ulcer of the duodenum. The patient had a sudden attack of pain, vomited first some bile-stained fluid, and after about an hour brought up, what his doctor described as, faecal vomit. When he came into the hospital the right side of the upper abdomen was rigid, and the patient was in most intense pain and was collapsed. With a history of old stomach trouble and of this sudden acute attack, the diagnosis of ruptured duodenal ulcer was made at once. The only point against that diagnosis was the definite assertion of the doctor that there had been faecal vomiting. If I had believed this I might have changed my diagnosis, but I came to the conclusion that the so-called faecal vomit was really partially digested blood, the vomit therefore being offensive and dark-coloured. The reason for this altered blood is that when the intestines are congested the mucous membrane becomes cedematous and exudes blood-stained fluid.

A rigor is sometimes noted, but is not at all constant. It is of interest because rigor occurs during the passage of a stone, and in that way we may confuse acute peritonitis with the passage of a gall-stone or renal calculus. The presence of a rigor does not necessarily mean the passage of a stone.

The temperature immediately after perforation is practically always sub-normal; but with the commencement of peritonitis it nearly always rises slightly—a degree or so. Sometimes the temperature is very high, but after a few hours it often falls and remains sub-normal throughout the case.

The pulse is almost without exception rapid and very thin in volume. In abdominal surgery more

attention is paid to the condition of the pulse than to the temperature. The aspect of the patient, even at the commencement of the peritonitis, is anxious. His face is drawn, the eyes become sunken, the lips dry and crusted, and we often find a duskiness of the face even after a few hours of peritonitis. Later the "facies hippocratica" becomes evident.

On examining the abdomen the first thing we notice is a limitation of the movements of respiration, which is practically the first sign of a severe peritoneal lesion. In cases of appendix and pelvic trouble causing general peritonitis, the absence of movement will probably be confined to the lower half of the abdomen. The abdomen is not distended at first; but it is nearly always rigid, and in some part of, or over the whole abdomen the muscles are board-like. Later on we find distension and tympanites. We often find shifting dullness on moving the patient about. That dullness does not necessarily mean free fluid in the peritoneal cavity. It is accounted for by parts of the small intestine and of the transverse colon becoming distended with fluid, which shifts as the patient is moved about. Rectal examination causes very much pain and affords little information. There is often pain on micturition. I mentioned that in peritonitis, due to perforation of the gut, free gas is usually found in the peritoneal cavity. But it is very unusual to discover free gas in a general peritonitis due to a perforated appendix. I only remember two cases in which free gas could be detected on percussion, and those were cases in which a large abscess had formed in the pelvis and extended up into the abdomen. They were really cases of localised peritonitis.

In considering the most common cause of general peritonitis—namely, disease of the appendix—we ought first to bear in mind the class of case in which general peritonitis is likely to occur. Let me first draw your attention to the different types of acute inflammation in the appendix. The first is one in which either the whole appendix becomes inflamed and thickened, with the formation of adhesions and flakes of lymph around it, or there may be a stricture in the lumen of the appendix, and a collection of pus or muco-pus in its distal portion. These two forms may subside without any leak or perforation, and the patient recovers. This represents, then, the first type of acute appendicitis. The second type is one in which a minute leak occurs in the appendix, adhesions having previously formed in the neighbourhood of the inflamed part, with the result that the general peritoneal cavity is shut off, and an abscess forms. The third type is much more serious. In this a small leak occurs before any firm adhesions have formed, and only frail adhesions separate the leak in the appendix from the general peritoneal cavity. In such cases we get local spreading peritonitis. The inflammation spreads locally, but does not become absolutely general at first. In the fourth type the appendix becomes gangrenous and ruptures without the preliminary formation of adhesions, producing acute general peritonitis immediately. This latter type, however, is not the only one that is dangerous, for a localised abscess, if neglected,

may burst, and produce general peritonitis, or the localised spreading condition may at any moment become general. In my experience the worst cases of general peritonitis are those in which an abscess of considerable size bursts into the general peritoneal cavity. An abscess in connection with the appendix may contain four or five ounces of intensely virulent pus, and when this pus becomes diffused over the peritoneal cavity, the toxins in the pus are rapidly absorbed by the healthy peritoneum. In a case in which a large abscess has burst the patient is dusky-coloured, has a miserable pulse, and looks practically hopeless. The cause of the rapidly fatal termination of acute general peritonitis is undoubtedly toxæmia. The toxæmia arises from the absorption of toxins from the peritoneal cavity, and secondly from the interior of the intestines. That is a point not always recognised. With regard to the absorbent power of the peritoneum, the most rapid and active absorption takes place in the upper part of the abdomen, and the least active from the pelvic portion. I have on several occasions known a patient continue at his work with an abscess, due to appendicitis, in his pelvis, and he has only applied for advice on account of the swelling in the lower part of the abdomen; in fact there have been no urgent symptoms at all. But if the trouble is in the sub-phrenic region the serious symptoms will always occur early. When pus has accumulated in any part of the peritoneal cavity the peritoneum loses its power of absorption.

The next point is the absorption of toxins from the intestines. The *Bacillus coli communis* exists in large quantities in the lower part of the small and in the large intestine in health, and gives rise to no ill effects; indeed, rather the reverse. But as soon as peritonitis occurs the changes which take place in the walls of the intestine, due to impaired nutrition and to the peritoneal inflammation, evidently cause the secretion by the intestine of a different medium, in which the *Bacillus coli communis* loses its beneficent character and secretes this highly poisonous toxin. Then, again, the intestines which are subject to acute general peritonitis lose their power of resisting the absorption of toxins, so that any toxin which is poured out in an inflamed piece of intestine will be absorbed very easily and rapidly. Thus the general system is attacked by a double invasion of toxins, the first one coming from the peritoneal cavity, and the second one from the interior of the intestines. Unless we can stop this double invasion the case is likely to be fatal. Nature sometimes endeavours to check the absorption of toxins from the intestinal canal by producing diarrhoea. That is also the aim of those surgeons who treat general peritonitis by repeated saline purges. Modern surgery, however, teaches that the most hopeful way is by laparotomy, and the surgeon proceeds first to remove the cause of peritonitis, and after that to remove all sources of toxic infection. This should be done by thoroughly removing all the pus from the general peritoneal cavity; and in addition the intestinal toxins must be got rid of. This can only be done by emptying those portions of the bowels which are distended with fluid. The fluid with which the bowels are distended is really

a virulent culture of *Bacillus coli communis*. The first indication is not to give any morphia, since this prevents Nature from attempting to get rid of the toxins by diarrhoea. The second indication is to evacuate any pus as soon as possible. In taking a case of general peritonitis following a rupture of the appendix the prognosis will depend almost entirely upon the length of time which has elapsed since the perforation took place: if within six hours the patient will probably be saved. Beyond that time the prognosis becomes graver for every hour of delay. When there is appendix trouble we usually obtain some indication of the nature of the disease by the history of the previous attacks of appendicitis or by the rigidity over the appendix.

A question of some importance is the choice of an anæsthetic. In children suffering from acute septic trouble the giving of chloroform is liable to produce acetoneuria, which has an injurious effect upon the child's chances. In the case of a child pure chloroform should not be given; the alternative is ether by the open method, or a mixture of ether and chloroform. But as little chloroform as possible should be given. In adults the question of spinal analgesia should also be considered. When the patient is greatly collapsed, injection of a pint of saline containing an ounce of brandy, per rectum, before the operation is desirable. Intravenous infusion may be given and should be continued during the whole of the operation, as much as five pints being given. I may remind you that saline solution for intravenous injection should have a strength of $1\frac{1}{2}$ drachms to the pint, and not 1 drachm to the pint. The reason of using saline solution of the strength of 1 drachm to the pint is because this represents the composition of Frog's serum, whereas one and a half drachms to the pint more nearly corresponds to the constitution of normal blood serum. Another important point is that the salt itself should be sterilised by boiling. I have often seen saline prepared by carefully boiling the water and then allowing some to cool, afterwards laddling out salt from a dirty box into the cold or lukewarm sterilised water. Such procedure introduces a very great risk to the infusion of saline solution into a vein. It is desirable always to make the saline of double strength, boil the salt with the water, and dilute it by adding an equal quantity of cold sterilised water. The temperature at which the saline is introduced must not exceed 105° . If the saline in the reservoir has a temperature of 105° and the rubber tube through which it is flowing is passed through a basin of fairly warm water just before it enters the vein, any loss of heat which the saline might undergo between the reservoir and the vein is prevented. It is necessary to give one other warning about saline: its introduction must be continuous; we must not stop giving saline and then go on again. If we stop putting in the saline and pinch the rubber tube, a clot is almost certain to form in the vein; if, afterwards, we commence again to inject saline, we shall drive that clot into the right side of the heart. I have seen a patient die suddenly during an operation from that cause.

Coming to the actual operation, the first point is, of course, the position of the incision. If we are

dealing with a case of general peritonitis from appendix trouble the incision should be made along the outer border of the right rectus muscle. We should not make the incision too long to start with. With an incision three inches long the nature of the peritonitis can be determined. As soon as we find that we have to deal with an inflamed appendix it is very much better to enlarge the incision than to attempt to remove an inflamed appendix through a small incision. The latter course adds to the liability of tearing the inflamed part or enlarging the rupture. If pus is present the first thing to do is to put a large tube through the incision so as to favour the escape of pus. Having got rid of the first lot of pus, and before flushing out the abdomen, the appendix must be searched for; it is then excised with as much care as possible and its stump closed and invaginated into the cæcum. The next important step is the drainage of the peritoneum. There are three places in which it is necessary to drain. The first of these is the right loin. This is absolutely essential in every case of general peritonitis from appendicitis. The way in which these openings are made is by means of an incision through the skin in the interval between the last rib and the crest of the ilium, behind the posterior axillary line. The incision is made an inch in length. A pair of large forceps is then taken and pushed by a boring motion through the muscles till its point presents under the parietal peritoneum. The finger of the disengaged hand is passed into the wound and feels the forceps beneath the peritoneum. By keeping the finger upon the point of the forceps the operator can ensure that no damage is done to the gut. When the pair of forceps is pushed into the peritoneal cavity its point is made to present into the abdominal wound and a piece of drainage tube is caught by the forceps and dragged across the peritoneal cavity and brought out of the lumbar wound; the portion which is inside the abdomen is directed upwards, the purpose being to drain the right sub-phrenic space. A similar lateral drain is then made on the left side. The tube is introduced in a similar manner, and the left sub-phrenic space is drained.

We have only one other position for drainage, and that is in connection with the pelvis. When pus has collected in the pelvis the best way of draining it is by means of a rectal drain. The only objection to this is the necessity for the operator himself to put one of his fingers into the rectum; it is hardly possible to make use of the finger of an assistant with any assurance. A large pair of forceps is passed into the pelvis and a finger put into the rectum. At a point just above the prostate in a male we can feel the points of forceps through the wall of the rectum, situated about a quarter of an inch from the finger. When the tip of the forceps is felt as close as that to the finger we know that we have got nothing but the wall of the rectum between the forceps and the finger, and we can push the forceps through. We push the rectal wall down towards the anus, bore through the rectum, and the tip of the forceps presents through the anus. A piece of drainage tube is then caught in the open mouth of the forceps which are projecting through the anus, and by means of the

forceps the piece of drainage tube is pulled either into Douglas's pouch or the recto-vesical pouch, which it is desired to drain. The tube is left within an inch of the brim of the pelvis, the other end projecting about an inch beyond the anus. The tube is grasped by the rectum and the anus, and is not likely to come away. Thus we have a complete method of drainage—a lateral drain in each loin and the pelvic drain. Having carried out this task, it is now the time to wash out the peritoneum. A great mistake is made in washing out the peritoneum before it has been drained. Only one substance is suitable for this purpose—namely, saline. With antiseptics there is a risk of damaging the peritoneal cells which are already inflamed. Another objection to antiseptics is that a large quantity may be absorbed, and may poison the patient. Having carried out this operation, we close the abdominal wound, leaving a space for drainage and fix the drainage tubes with gut sutures. A point which I have omitted to go into has reference to cases of enormous distension of the small intestine. When the intestines are enormously distended it is quite useless to put them back into the abdomen containing this virulent culture of *Bacillus coli communis*. We must open the intestines and empty them of their contents. A large loop of intestine is brought outside the abdominal wound, and is packed round with towels. An incision of about an inch long is then made into the convex border of the intestine, the hand, previously washed in saline, is put into the abdomen and an endeavour made to milk out into this opened coil as much as possible of the intestinal contents. In this way one is able usually to empty out the greater part of the contents of the small intestine. The wound in the intestine is then sewn up and the coil replaced. Some surgeons have recommended putting in saline solutions after removing the contents, thereby avoiding shock.

After-treatment is important. The first thing to be considered is the position of the patient. When the patient is suffering from intense shock he has to be lying low, but after the first shock has subsided he may be put in Fowler's position—half sitting up—for the purpose of preventing any pus left in the peritoneum from tracking up to the sub-phrenic spaces. What we want to do is to make it track towards the pelvis, where it will be immediately evacuated by the rectal drainage. Stimulation is most important, and it is hardly possible to give too much in the way of stimulants. As soon as the patient can swallow he should be given brandy or champagne. When the patient has got back to bed he should be given a hypodermic injection of strychnine—one-thirtieth of a grain—and half this dose should be repeated every four hours. I do not like the administration of strychnine during the operation. The next thing is the administration of salines. The salines are given half a pint at a time every four hours. This is much better than the common plan of giving a pint every six hours. I add to each pint of saline injection a tablespoonful of grape sugar. The sugar can be absorbed from the rectum just as easily as salt, and it is one of the most important substances in influencing the nutrition of the body. One point upon which I insist is

that the patient must be given three pints of fluid per day. If only one pint can be taken by the mouth the other two pints must be given by the rectum. The total amount taken per day must in any case be made up to three pints. Sometimes we cannot introduce the saline injection into the rectum owing to the rectal drainage. As a rule, the rectal drainage does not interfere with the saline injection, but in some cases it does, and in those cases we must give salines subcutaneously. The saline should be introduced beneath the pectoral muscles or at the side of the abdomen. It is not a pleasant way, and one has to be careful in subcutaneous injections, not only about the sterilisation of the saline itself, but also about the sterilisation of the patient's skin. With regard to the management of the bowels, to encourage the passage of flatus a rectal tube is passed up and left *in situ* five minutes before each saline is given. On the evening of the second day I nearly always give two grains of calomel, which very seldom gives rise to any discomfort. On the following morning usually a simple enema is given. In most cases this is all that is necessary. If, however, it fails, I give a magnesium sulphate injection, made by dissolving an ounce of Epsom salts and half a drachm of turpentine in a pint of gruel. That is injected as high up as it will go, and it nearly always produces some result. Another method of assisting the calomel is by giving a mixture containing two drachms of mag. sulph., 5 minims of tincture of belladonna, and 10 minims of tincture of nux vomica every four hours. As to intestinal antiseptics, the only one which I should feel inclined to use is a culture of lactic acid bacilli. The most scientific way of attacking the *Bacillus coli communis* is to put in its adversary, the lactic acid bacillus, and let them fight it out.

With regard to food, one of my fads is that milk should not be given until the bowels have acted. I object to milk because it produces a bulky motion, and is certainly constipating. What the patient requires is undoubtedly sugar and water. The simplest way of giving sugar and water is by means of raisin tea. It is made by pouring boiling water upon raisins, and pouring off the fluid afterwards. The fluid contains grape sugar and also has the pleasant muscatel flavour of the raisin. Besides that, we give barley water and albumin water and occasionally beef-tea. Personally I do not believe much in the nutritive value of beef-tea. It is a stimulant rather than a nutriment, and like the meat extracts it does no harm and may do good. But the staple things are barley water, albumin water, and raisin tea. Directly the vomiting has ceased and the bowels have acted the diet can be enlarged by giving junket and custards, and on the fourth day fish or chicken can be given. A question may be asked as to how long these drainage tubes should remain in position. The rectal drainage tube should remain for two days. It is seldom necessary to leave the other two drainage tubes for more than three or four days. A case of general peritonitis that is going to get well progresses very rapidly, and after the first twenty-four hours, if no more toxins are absorbed, the prognosis is good.

MEDICINE.

TWO FATAL CASES OF LANDRY'S PARALYSIS.

LANDRY's paralysis—acute ascending paralysis—is not common; yet it is not so rare but that most practitioners come across it sooner or later. The following account of two recent cases may, therefore, be of interest:—

A man, aged 57, a journalist, came under observation on July 28. He had previously enjoyed excellent health, was neither alcoholic nor syphilitic, and came of a healthy and long-lived family. On July 17, when getting up in the morning, he felt a curious sensation in his left foot with a sense of slight loss of power in it. The feeling of weakness spread steadily upwards to the calf and knee. Then, during the day, tingling sensations and weakness developed in the tips of the fingers of the left hand, spreading thence to the hand and arm a little later. The right upper limb also seemed to be affected, though the abnormal feeling was less marked here than on the left side. Next day, July 18, the patient was quite unable to rise. Both lower limbs were helpless, and so was the left arm. By July 19 all four limbs were completely paralysed.

When seen on July 28 the man was found to be very corpulent; he was lying on his back in bed, incapable of moving either limb or trunk. He could still move his head easily; speech and brain power were good; there were no difficulties in breathing or swallowing. Percussion of the paralysed muscles evoked local fibrillary contractions. Excitability to the faradic current was much diminished, without there being any notable increase in excitability to galvanism. The cremasteric reflexes were abolished. The pharyngeal and the pupillary reflexes were normal. There was no headache, nor was any pain complained of. The sphincters were natural. There were no visceral symptoms, no albuminuria, no coldness nor cyanosis of the extremities.

Some days after admission to hospital the toes began to exhibit contractions. Little by little the patient succeeded in making very limited movements of his feet, of his fingers, and of his shoulders.

On August 19 diarrhoea set in. There were six motions in the night. Next day this diarrhoea persisted, though the general condition remained good. On August 21 the patient was seized with dyspnoea at 3 A.M., this symptom becoming rapidly and progressively worse until death took place at 7 A.M., without any agitation or convulsions.

At the post-mortem examination the lungs were very congested and voluminous. The whole body was livid, and so were all the viscera. The heart and aorta were healthy. The brain exhibited lividity of its meninges, but no gross lesion of cortical, central, cerebellar, or bulbar parts. The cerebral arteries were sound. Histological examination of the spinal cord and peripheral nerves exhibited no obvious lesion, except slight neuritis of the sciatic nerve and of the nerves of the forearm. The vagi exhibited no lesion at all.

The second was a man aged 35 when admitted to hospital on October 28. He was a railway guard.

He had been in perfect health until one morning, 25 days before he came under observation, when he noticed a certain amount of disability when he moved his head. At first he paid little attention to it, thinking it was an ordinary stiff neck. During the day, however, the trouble increased, and spread from his neck to his limbs. He found it difficult to walk along the platforms when his train stopped at stations, and it became impossible for him to help in getting the luggage in and out of his van. He went to bed without doubting he would be better after a night's rest; but next day he was worse, and he sought medical advice. At first the doctor regarded the symptoms as rheumatic, saying that they were not serious. The patient dragged himself home, took to his bed at once, and never left it afterwards. Paralysis rapidly became complete.

When seen in hospital on October 28 he was a big man, very stout, lying helpless on his back. His extremities were rather cold and decidedly livid. Intelligence was perfectly retained; the history he gave was clear and concise. The upper and lower limbs were absolutely inert. Neither arm and neither leg could be moved upon the plane of the bed, still less raised above it. The trunk was equally paralysed. When the man was asked to try and sit up not a single muscle could be detected moving. The muscles of the neck and face, on the other hand, were natural; the head could be turned to either side at will. There was no ocular paralysis. Swallowing was imperfectly performed, fluids particularly often finding their way into the larynx and causing a troublesome cough, which made the lividity still worse. There was no pain; the main discomfort was in regard to breathing. Sensations were unimpaired. Both knee-jerks were abolished; the plantar reflexes were flexor. The sphincters were not paralysed. There were no trophic changes, no wasting of muscles. The cyanosis and the coldness of the extremities seemed to be due to the impairment of respiratory movements. The patient looked like one being suffocated. On auscultation a few subcrepitant râles could be heard at the bases of the lungs. The heart was beating faster than normal (130), but otherwise it seemed natural. The appetite was good, the tongue clean and moist. The urine contained neither sugar nor albumin.

On October 30 the paralysis was neither better nor worse, but the dyspnoea was notably greater. The skin generally was cyanosed, the face purplish, the eyes injected. The patient, unable to move his body, was constantly moving his head about as though seeking for more air. He kept on asking nurse to remove the mucus which re-accumulated in his throat, and which he could not get rid of for himself because he was quite unable to cough. Oxygen inhalations and syrup of ether were the only things that gave him any relief. Half an hour later he fell asleep, and two hours after this he suddenly ceased to breathe, without any struggling and without waking up.

At the post-mortem examination the lungs were engorged with blood, but not cedematous. The heart weighed a little more than normal, but it looked healthy; the aorta was free from atheroma. The liver, kidneys, spleen, suprarenal capsules, pancreas, stomach, and intestines were all normal, except for lividity. The brain was congested, but exhibited no obvious lesion; its arteries and meninges were healthy.

Histologically, except for much passive congestion, the lungs, liver, and kidneys presented no disease. The myocardium was natural. The spinal cord and the medulla oblongata showed no definite abnormality either, nor did the peripheral nerves, nor the muscles that had been paralysed.

Cerebro-spinal fluid had been obtained by lumbar puncture during life; it exhibited a few red and white corpuscles, but only in the same proportions as in the blood; there was no meningitic reaction.

In these two patients the symptoms were almost exclusively motor, which is one of the marked features in Landry's disease. The paralysis is widespread and progressive. In the first patient the onset was in the left leg, spread thence to the arm of the same side, then to the other arm, and lastly to the right leg; it was, it will be noted, ascending on the one side, but descending on the other. In the second case the first symptoms appeared in the muscles of the neck, then were noticed in the legs, and lastly in the arms. These irregularities in the direction of spread—departures from the strictly "ascending" course—are so common as to be the rule rather than the exception in these cases. There is even a strictly descending type, which is the probable diagnosis in the case of the celebrated naturalist, Cuvier. In most cases there is, to start with, a simple paresis, which gradually but steadily spreads until it finally becomes complete; but the order of onset and of spread is by no means constant.

Cases that end fatally do so, as a rule, by inter-

ference with breathing; this may sometimes be due to paralysis of the intercostal muscles followed by paralysis of the diaphragm, suggesting changes in the cervical enlargement of the cord. In other cases the coincident tachycardia suggests a lesion in the medulla oblongata. It is often stated that it is unusual for the fatal respiratory failure to occur if the patient has already survived the third week, but both the above cases are exceptions to this so-called rule—one died on the twenty-seventh day, the other on the thirty-fifth; and in the latter hopes of recovery had already been aroused because some slight degree of voluntary movement had begun to return. This teaches us that we must be in no great haste to give a favourable prognosis, even when the third week has gone by.

Dyspnoea in Landry's paralysis is not always either sudden or immediately fatal. In the first of the above cases it is true that death occurred in three hours from its onset, but in the second dyspnoea was already well-marked when the man was seen on the twenty-fifth day, and it persisted and increased for two days more before death occurred.

Finally, it is interesting to note that post-mortem examination in the above two patients, as in all cases of Landry's paralysis hitherto described, revealed no adequate cause of death. This may be due to the acuteness of the disease, affecting the nerve tissue but not allowing it time to exhibit obvious pathological changes. Acute death of a tissue without departure from normal structure is well seen in bone in cases of acute suppurative osteitis. On the other hand, the disease may be one which paralyzes motor end-plates and produces no changes in the rest of the neuro-muscular chain—comparable to curare poisoning, for instance. In any case, the fact remains that Landry's paralysis is a cause of death of which the post-mortem evidence is almost nil—an argument against the dissociation of clinical and pathological evidence in coroners' courts.

PRACTICAL NOTES ON DIAGNOSIS AND TREATMENT.

Mental Deficiency in Childhood.

SLIGHT degrees of cretinism are much more common than is generally supposed, though they are not always of congenital origin. In these cases stunting and delayed growth are the most marked features, combined with mental dulness and apathy. It is quite justifiable to try the therapeutic effect of doses of thyroid extract as an aid to diagnosis.—*Dr. C. Paget Lapage.*

Treatment of Asthma.

A CUP of strong black coffee is a traditional remedy for asthma; its effect probably depends on the caffeine which it contains. Another useful drug is nitrate of ethyl. Pilocarpine sometimes succeeds when other remedies fail. This acts on the vessels and relieves spasm. Adrenalin though it has an exactly opposite action is yet sometimes useful. To prevent the recurrence of the attacks, a combination of bromide and iodide of potassium is excellent.—*Dr. Samuel West.*

The Treatment of Uric Acid.

IN my opinion the late Sir Wm. Roberts's simple prescription of half a drachm of bicarbonate of potash in a tumbler of water at bedtime, to stem the nightly acid tide, is, on the whole, one of the most useful recommendations, apart from tonics, cures at watering-places, and change of scene and air.—*Dr. Goodhart.*

X-Rays in Graves's Disease.

IN almost every case there is a sedative effect which is manifested very early in the treatment. In 90 per cent. the rate of the heart diminishes and the palpitation is relieved. In two-thirds there is a gain in weight. With regard to the goitre the results are less uniform. At first it may become rather more tense, but gradually it softens, and in quite 20 per cent. of the cases it diminishes materially in size. Exophthalmos is the last symptom to yield to treatment, and in many cases it persists.—*Dr. A. C. Jordan.*

SURGERY.

ASEPTIC SURGERY.

THE last few years have witnessed a gradual but steady increase in the popularity of aseptic as opposed to antiseptic surgery. This has been a gradual evolution, and we can trace the various steps by which it has been brought about. Lord Lister in this country found that certain strong chemical compounds had the effect of destroying these micro-organisms, and devised methods by which he claimed suppuration could be reduced to a minimum. He met with the opposition which is the experience of all reformers; but eventually he gained the day, though it was some years before his teaching was universally accepted. This was the result of two factors: his original methods, *e.g.* the carbolic spray, etc., were admittedly inadequate; but further, imperfect as they were, they were not properly applied by the surgeons who first used them. One hears, for instance, stories of surgeons in the early days of antiseptic surgery who operated with a carbolic spray, but omitted to cleanse their hands, and then published their results to prove that Lord Lister's work was incorrect.

In spite of these early difficulties, however, antiseptic surgery made the progress it was bound to do, and a new variety of antiseptic was constantly discovered. Of these, carbolic acid and the salts of mercury, either mercury perchloride or mercuric potassium iodide were the ones that came into general use.

By their means a very high percentage of operations without suppuration could be guaranteed; but they had certain disadvantages. Cases of poisoning by mercury after irrigating large suppurating cavities with corrosive sublimate or biniodide were reported; and it was argued that the introduction of such powerful chemicals into the peritoneum, for instance, was likely to diminish its vitality. Some means was therefore sought by which pyogenic organisms could be eliminated from the field of operation without as far as possible the aid of chemical re-agents. Thus the rise of aseptic surgery.

Heat of a sufficiently high degree is admittedly the best of all means of sterilisation, and everything connected with a surgical operation can be submitted to this with the exception of the patient's skin, the surgeon's hands, and certain forms of ligature. All instruments to be used must be boiled. Some surgeons say that to boil a knife destroys its edge. This is partially true, but one boiling is not sufficient to make it useless, and after each operation it should be reset. Those who object to boiling scalpels usually pass them through a carbolic solution 1 in 20 and keep them in methylated spirit, but this is a departure from the aseptic method.

All dressings, towels, swabs, etc., should be placed in specially made drums, with a visor arrangement which can be opened during the

sterilising process and shut afterwards. The drums are placed in an autoclave and heated to 115° C., their contents being thus rendered absolutely sterile. The mackintoshes which are placed on the patient should be subjected to the same treatment. This can easily be done by employing instead of ordinary mackintoshes large sheets of specially prepared jaconet.

One great advantage of this system is that it is not absolutely essential to carry about large trays to place one's instruments in. A sheet of the sterilised jaconet may be laid over a table and on this again a sterilised towel on which all instruments can be put when they are taken out of the steriliser. If it is preferred to keep them in fluid, sterilised normal saline solution is the best to employ.

With regard to the surgeon's hands, much controversy has ranged round the question of india-rubber gloves. Arguments have been adduced against them that they impede the operator and increase the time of the operation; that if a glove is accidentally pricked by a needle there is a chance of the wound becoming thus contaminated. In the writer's experience it is not more difficult to operate with gloves when one is once accustomed to them, provided that the gloves fit well and are properly put on. The best way of putting them on is to fill them with saline solution, insert the hand, and then hold up the hand so as to allow the fluid to run out at the wrist. Some surgeons prefer to cover the hands with liquid soap and then put on the gloves. This is an easy method, but when the glove is on it does not adhere firmly to the fingers, and the difficulty of the operation is undoubtedly increased thereby. The argument that accidental pricking of the glove may lead to contamination of the wound is met by the rule that the hands must always be cleansed as carefully as if one was about to operate without gloves.

In one particular only are we now unable to dispense with chemical antiseptics, and that is in the preparation of the patient's skin; and to ensure successful asepsis this is particularly important. The success of operations where asepsis is absolutely essential to the welfare of the patient, such as in opening the knee-joint, depends largely on the thoroughness with which this is done. It is well, therefore, to begin the preparation two or three days before the operation by shaving the part if necessary and then thoroughly cleansing it with soap and water. It should next be rubbed with ether to get rid of fatty debris, and swabbed over with a solution of mercuric potassium iodide in spirit. Finally it should be wrapped in a biniodide or carbolic dressing covered with jaconet to keep it moist, which should be changed daily until the day of operation.

If all these precautions are observed the percentage of clean cases which suppurate can be reduced to a minimum. The individual factor varies with every surgeon, but in most tables of statistics of operations performed aseptically the number of cases which suppurate amount to less than 5 per cent.

LARYNGOLOGY AND RHINOLOGY.

CUT THROAT.

WOUNDS of the larynx and trachea may be the result of gunshot injuries or of any form of accident, but they are most often self-inflicted and due to attempted suicide. There is, curiously enough, a widespread belief among would-be suicides that death follows rapidly on opening the windpipe, and consequently the head is usually thrown well back and the cut is made in or near the middle line of the neck. This position makes the thyroid cartilage and trachea very prominent and, as the muscles of the neck are generally strongly contracted at the same time, the great vessels are well protected by the sterno-mastoid muscles and the cartilages of the wind-pipe, and they often escape injury. Suicidal wounds are usually more or less horizontal and are naturally made from left to right, unless the subject be left-handed. The lesion is very frequently made above the hyoid bone, for there seems to be a general vague idea that cutting the throat in this position is a rapidly fatal procedure, but as a matter of fact such wounds merely enter the thickness of the lingual muscles and do not penetrate to the pharynx or do any very serious harm; the lingual artery of one or both sides may be divided, and hæmorrhage from it may be free.

Wounds made in the thyro-hyoid space frequently reach the pharynx and injure the epiglottis; this may be partially severed and may cause suffocation by hanging down over the aperture of the larynx. As the blood flows into the throat above the vocal cords, it can be coughed out and will not enter the lungs to cause asphyxia or pneumonia. The thyroid cartilage is hard and is rarely cut through, but it may be much hacked about, so that parts of it necrose later on. The larynx may be opened below the cords by a wound through the crico-thyroid membrane, but the upper part of the trachea, which is prominent in the neck, is a site very often selected for the cut. Here the wind-pipe is readily entered; sometimes the trachea is completely divided, when the lower end will retract from the wound deeply into the neck and produce a very dangerous dyspnoea. The œsophagus may also be opened and even the cervical vertebrae have been scored by the knife. The most severe wounds are usually inflicted by persons definitely insane and, as the great vessels are then also generally involved, they are very rapidly fatal.

The two most urgent sources of danger are hæmorrhage and asphyxia. If the great vessels have been opened, the patient is usually already dead before assistance arrives. Next to death from loss of blood, the most pressing danger is that of the entrance of blood into the trachea and lungs. Blood which enters below the vocal cords is expelled with difficulty, and this difficulty is increased by the fact that the patient is nearly always in a very depressed and collapsed condition. This blood either kills at once by suffocating the patient, or it later sets up the very fatal form of inflammation of the lungs known as "inhalation pneumonia." Shock is always a prominent feature, and the patient has generally no wish to live; still, if he survive the

early dangers of shock and hæmorrhage, he may recover from very extensive injuries. Small penetrating wounds may produce the most extensive emphysema. The later dangers are those of sepsis and pneumonia. Asphyxia may be immediate, and due to retraction of the completely severed trachea, or it may come on later and be caused by inflammatory swelling, which ensues with great rapidity. Finally, cicatricial contraction may result, and cause most severe and intractable stenosis.

The first point, then, is to stop the bleeding; if blood is entering the wind-pipe, pressure must be at once applied, tracheotomy performed, and the trachea packed with gauze above the cannula. If the wound is low down in the trachea, the cannula may be bandaged round with gauze and inserted through the wound; but it is far better, whenever possible, to introduce the tube through a clean tracheotomy incision made below the wound. Any packing introduced into the air-passages should always be in the form of ribbon-gauze with no cut edges from which threads may be detached, and both ends of every piece of gauze must be fixed to a tape tied loosely round the neck, for the sucking action of respiration is very powerful, and a loose piece will be readily drawn down the trachea. If the hæmorrhage can be thoroughly checked, and no blood is entering the wind-pipe, it is open to question whether tracheotomy should, or should not, be performed. It may sometimes be avoided when the wound is clean and sharply incised, but it must be remembered that œdema may come on with great rapidity, that the bleeding may recur, and that, if the wound become septic, the discharge may find its way into the trachea and set up pneumonia. It is, therefore, advisable, in the large majority of cases, to introduce a tracheotomy tube below the wound and to plug the wind-pipe above the cannula. It is most important, for the avoidance of subsequent stenosis, to secure very accurate coaptation by suture of the wound in the air-passage. The muscles and fasciae of the neck should also be carefully sutured as far as may be permitted by due regard to the very free drainage required. It need hardly be said that, if the wound be very dirty or much contused, stitches should only be inserted where absolutely necessary; but it is in any case essential to sew up the cut in the wind-pipe, or otherwise intractable narrowing will certainly result; and this can be done without danger if a tracheotomy tube has been inserted lower down. Wounds of the œsophagus or pharynx must also be carefully sutured with a separate layer of stitches in the mucous membrane, and ample provision for drainage down to the wound. In such cases the patient must be fed by the rectum for about three days, unless a soft œsophageal tube can be retained *in situ*. In other cases there is no reason to withhold food by the mouth, but it is always wise to begin by giving a few spoonfuls of sterilised water, to make sure that it passes the wound safely. Finally, treatment must be directed to the accompanying shock; if blood has been aspirated, opium is dangerous, and stimulating expectorants are indicated.

GYNÆCOLOGY.

GYNÆCOLOGICAL DIAGNOSIS AND THE MICROSCOPE.

THE accurate diagnosis of some of the diseases of women is often a matter of great difficulty or even impossibility by the ordinary means of inspection and palpation, and frequently the aid of the microscope must be called in to settle the question. This is especially the case in early carcinoma of the cervix or uterine body, in doubtful growths of the vulva, and in some large tumours of the uterus. The differential diagnosis of the many varieties of ovarian tumour can often be made only by the microscope, but this cannot be considered quite in the same category as early malignant growths of the uterus for instance. Ovarian tumours, with few exceptions, must be removed whether innocent or malignant, and the differentiation of them after removal is of scientific interest only. The removal of small pieces from the cervix or uterine body for diagnostic purposes is quite another matter, and upon accurate diagnosis turns the question of radical operations on the uterus.

There can be nothing more annoying to the medical man than to obtain, with great difficulty perhaps, a piece of the cervix, to send it to a pathologist, and finally obtain an indefinite report which leaves the question of malignancy in doubt. Yet this does happen occasionally, and the result is that opinions are freely expressed that the microscope is useless for the diagnosis of difficult gynæcological cases. It is often, however, not the fault of the microscope or the pathologist who uses it, but rather of the specimen itself which is to be examined. To obtain suitable specimens for examination is not an everyday occurrence in general practice, and the preservation of such specimens when obtained is not always clearly understood. In nothing is this seen so frequently as in specimens from the cervix and curetted fragments from the body of the uterus. It is not easy to cut a representative piece of tissue from a cervical growth, and it is practically impossible to get satisfactory curettings from the uterine body unless the cervix is fully dilated under an anæsthetic and a sharp curette used. For instance, it is impossible, as a rule, to get a satisfactory fragment from the uterus with, say, an ear spud or a tiny curette through the undilated cervix. Still worse, it is impossible as a rule to diagnose a malignant growth of the uterus from some vaginal discharge collected on a diaper and allowed to dry; and yet this is a common sample of the miracles expected of the pathologist. It is an absolute fact which cannot be controverted that a definite opinion can be given in at least 98 per cent. of cases provided the material is representative of the lesion and properly fixed and preserved.

In the case of a suspected growth of the os uteri a wedge of tissue must be *cut out*, so as to include a portion of the growth and the underlying tissues. It is useless to scrape a little *débris* off the surface or to shave off the surface with a knife. *The base of the growth must be included.* After removal the

tissue must be *at once* placed in an efficient preservative, and not allowed either to dry hard in cotton wool or paper, or to macerate in water or saline solution. The simplest fixing fluid for general use is 70 per cent. alcohol, but one which is easy to make and very efficient is 10 per cent. of commercial formalin diluted with 90 per cent. of normal salt solution (.75 per cent.). Watery solutions of formalin without salt should never be used, for they so alter the tissues that they will not take a nuclear stain.

To remove a wedge from the os uteri, it must be exposed with a speculum in a good light, seized with a vulsellum, and then the required tissue cut out deliberately with knife and forceps. But the tissue removed must be representative of the lesion. Curetted fragments are more difficult to deal with, as they are so often mixed up with large quantities of blood. To get the best results the curettings should be carefully preserved until the operation is finished, and then floated in water or normal saline fluid. From this the organised tissues can be washed free of blood, picked out with forceps and dropped at once into the preserving fluid. If simply put into a bottle with blood, maceration always occurs, and glandular epithelium becomes shaken away from its attachments in a very short time. It does not matter how small the fragments are if they are picked out and preserved in this way: the pathologist can always cut good sections from them. When these tissues are properly fixed and hardened, sections must be cut from them by the paraffin method. Freezing methods may sometimes answer, but in general, where delicate glandular structures are concerned, paraffin sections are infinitely superior. Even if a rapid diagnosis is required, the paraffin method is the best of all, for in the case of small fragments like curettings, good sections can be obtained in about four hours. It is true that the freezing method can be used for *fresh* tissues, but the sections so obtained may not be sufficiently good to warrant a definite diagnosis.

The methods detailed above are equally efficacious for the diagnosis of materials left in the uterus after abortions or in cases of chorion epithelioma. It is true that special knowledge is required in dealing with gynæcological specimens; training in general pathology will not always suffice to help in the diagnosis of endometritis versus carcinoma, or retained conception products versus chorion epithelioma. It is practically hopeless for the medical man who has only the histological knowledge gained as a student to attempt the diagnosis of these conditions by the microscope, and it may be that the attempts of the unskilled have led to the distrust of the microscope which is so prevalent. It can only be repeated that to the skilled pathologist scarcely one case in fifty presents any difficulty provided the tissues are representative, properly preserved, and the sections from them cut by the paraffin method.

MENTAL DISEASES.

MENTAL DISEASE FOLLOWING INFLUENZA.

THE pathological relationship between insanity and the influenza bacillus has not yet been determined, though clinically some cases of mental breakdown seem to be due to the toxic effects of the microbic infection. In a great many cases with a history of the complaint it is the only discoverable ætiological factor; whilst in others it appears to be either the determining or the predisposing cause. Where it is the determining cause, the history given is that for some time the patient had a good deal of unusual mental stress—domestic, financial, or business worries—but that there was no indication of mental abnormality until an attack of influenza. The physical disability accompanying the attack, however, seemed to be the last straw, and he appeared suddenly to give up fighting against odds and become despondent. Where it is the predisposing cause, the friends report that after the attack the patient found that he was unable to do his ordinary work as well as before, or without much effort; and that this seemed to cause him a good deal of distress, which led to the first mental symptoms. The first signs of definite insanity may be many months after the influenza, but it is usually reported that the patient has never been himself since the attack, though it is often very difficult to get a description of exactly how the patient has changed.

Another interesting point in connection with these cases is that the attack of influenza is usually a mild one, and uncomplicated by any other trouble. It is found, too, that the patient did not treat the illness seriously, not commencing any treatment until late, and going back to ordinary occupation too soon—two errors almost invariably committed by patients suffering from the milder forms of influenza. The reason that these errors are so commonly committed seems to be that the toxins formed in this disease cause more prostration, and subsequent weakness, of the higher nervous centres than of the lower ones; and that lessened ability to stand mental stress is not so readily recognised as lessened ability to stand physical stress. Further, even if patients do recognise that their ordinary occupation is causing them more mental strain than usual, they will generally overlook the danger, and refuse to take any precautions to relieve it. In diseases, however, in which the lower nervous centres are more affected than the higher, and the subsequent weakness during convalescence is physical rather than mental, the patient not only realises this weakness, but will take precautions for recovering from it.

Cases of mental disease following influenza resemble one another in many respects, though the type varies with associated ætiological factors. The patients are usually depressed, and show marked signs of general nervous debility. The earliest symptom, and one which is usually very persistent throughout, is insomnia. This is accompanied by much loss of tone, and by muscular tremors, constipation, dirty tongue and foul breath. Food is

taken badly, and often the first indication of marked mental trouble is the appearance of delusions of suspicion against friends, due to an idea that food is being poisoned. Loss of self-control is noticed early in the attack, and often determined attempts at suicide are made. Hallucinations of any of the senses may appear, and delusions of all kinds. Sometimes the symptoms are of the maniacal type, and these also have physical symptoms of debility.

Recovery takes place in most cases, though the prognosis is not so good in patients with a family history of insanity. As regards the duration of the attack, it is unsafe to prophesy; but it is always well to insist on a prolonged period of convalescence, during which all anxiety and worry must be strictly avoided. Breakdowns are frequent in cases that are allowed to return to work too soon, and the relapses are often more serious than the original attack, besides disheartening both patient and friends. Some cases, instead of recovering, drift into a state of dementia, or become chronically deluded.

A great many of these cases could undoubtedly be caused to abort if proper care were taken by the patient. From the point of view, however, of prophylaxis, the need of proper rest during and after mild influenza attacks cannot be too strongly insisted upon.

As soon as any signs of mental symptoms appear, or it is found that the patient is feeling pressure in his ordinary work, complete removal from all domestic and business anxieties must be insisted upon. This will nearly always necessitate leaving home—a step which will certainly be strongly opposed by the patient himself, and frequently by others as well. No compromise, however, should be countenanced if a quick recovery is desired. The first step in treatment should be taken at the same time—namely, to see that the intestinal canal is thoroughly cleared of any accumulations. To ensure this, 5 grs. of pil. hydrarg. should be given at night, followed by 2 drachms of phosphate of soda in the morning; and this should be repeated every day for four or five days, or even longer if necessary. This active treatment will usually effect a marked improvement, and the insomnia, if present, will begin to abate. If insomnia is a serious symptom and is disheartening the patient, hypnotics may be prescribed. The best of these is Paraldehyde, if it can be borne by the stomach; but, if not, then Veronal. Five grains of this latter will usually be sufficient, or 2 drachms of Paraldehyde. Hypnotics should be discontinued as soon as possible, and the patient should never be informed what drug is being given. In cases where the muscular tone is poor, massage will be found to be of value. Of tonics in the low nervous cases, Lecithin, if given for some time, is amongst the best; but it does not show any effect for some time as a rule. Great care must be taken to prevent the patient going back to work until he is thoroughly well and has had a sufficient rest: neglect of this point is the most frequent cause of relapses.

THE SIXTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

THERE are few capitals in Europe where an International Congress of Medicine can be held with better effect than Buda-Pest, the capital of Hungary. Within the last twenty-five years a young and virile population has covered the site which it occupies with magnificent buildings and wide streets. The dominant palace and the stately Danube, wider by far than the Thames at Westminster Bridge, and with a current stronger than the outflowing tide, lend an impressiveness to the great city which is all its own. The very slightest touch of orientalism in the people, the buildings, and the trades serves to remind the visitor that only 200 years ago the whole country belonged to the Turks. As G. F. Stevens remarked "The East begins at Buda-Pest." The population, having succeeded beyond all expectation in their building, were determined to show that they were equally great intellectually, and that they could vie, and vie successfully, with the great capitals of the world. It is no slight task to organise a large Congress where every arrangement is submitted to the keen criticism of those who have attended many similar meetings. Buda-Pest is fortunate in possessing two members of the medical profession who are gifted in the highest degree with the powers of tact and arrangement necessary for such a purpose. Professor Müller and Dr. Emil de Grösy, the President and General Secretary of the Congress, must be wholly satisfied with the result of their labours, since it was the unanimous opinion of every nation who attended that the arrangements were as perfect in every particular as it was possible to make them.

The Sixteenth International Congress of Medicine will be remembered less for the scientific work presented at the sections than for the fact that, for the first time, a determined attempt was made to organise the Congress on proper business lines. Originally beginning in small gatherings, the necessary organisation was of the simplest kind—a President and General Secretary with a Treasurer was appointed triennially. These officers being elected for a definite object had no official communication with their predecessors or with their successors, and there was thus no continuity of policy. Honorary officers were not always appointed with discretion, and there was a general feeling that, as the Congress increased in size and the number of members multiplied, the original organisation was no longer sufficient, and new methods must be adopted. Special meetings were held, therefore, and it was determined after prolonged discussion that a permanent committee should be formed with a President, a paid Secretary, and a fixed office. Dr. F. W. Pavy, F.R.S., the eldest and one of the most enthusiastic supporters of International Medical Congresses, was appointed President of the permanent committee. It was decided that the meetings should be held at the Hague, but the nomination of the Secretary and the rate at which he was to be remunerated were left for future deliberation. The committee itself was to consist of not more than fifty members

chosen from the various national committees, the President and the Secretaries of these committees being members *ex officio*. There is every hope, therefore, that the affairs of the Congress will prosper under this arrangement, and that an unwieldy growth which was becoming troublesome will be brought again into proper proportions by judicious lopping.

The sectional meetings were held in the Polytechnic, in the old Parliament House, and in the lecture theatre attached to the National Museum. They were well attended, but nothing of any great or novel interest was brought forward. In the Surgical Section the subjects of appendicitis and of the means by which asepsis could be secured before operation received special attention; whilst the consideration of serum diagnosis and immunity in the Medical Section appeared to have taken the place of the older clinical papers. Indeed, immunity in some of its many forms may be said to have pervaded every section of the Congress, and it is apparent that this important subject is now enjoying the thoughts of the best minds throughout the world. The results at present are contradictory, apparently because they are veiled by a series of working hypotheses, each with a curious jargon of its own. A few salient points stand out already, and there can be little doubt that within a few years the subject will be greatly simplified and valuable results will be obtained prophylactically as well as in the actual cure of disease.

The subjects of the general addresses had been carefully selected; they were well delivered, and the attendance in each case was crowded. Dr. Holländer lectured upon Disease as depicted by Art in America before the arrival of Columbus, and showed by means of lantern slides the deformities produced by syphilis and lupus as they had appeared to the prehistoric potters. Dr. Bashford delivered a useful and interesting address on Cancer, in which he gave a clear statement of the present position of the question of its origin as a result of the work of the Imperial Cancer Research Laboratories. Dr. Loeb lectured upon Artificial Parthenogenesis and its bearing upon the Physiology and Pathology of the cell, and Mons. Laveran, of Paris, spoke upon Exotic Pathology.

The entertainments were well planned, and a special ladies' committee, with Madame Bokai at its head, issued a separate programme, and saw that it was carried out to the satisfaction of all who took part in it. For ladies and gentlemen alike there was a *soirée* of welcome at the Gallery of Fine Arts in the City Park on the first night; a *soirée* at the municipal buildings on the second day, and a ladies' evening on Tuesday. The Archduke Joseph received the members of the Congress at the Palace on Wednesday, and graciously spoke to a large number of the official delegates who had the honour of being presented to him by H.E. Count Albert Apponyi, the Minister of Public Instruction. Last, and perhaps best of all where all was good, was the *soirée* given by Count Albert

Apponyi at the Park Club, the most select in Hungary and the most beautifully housed. There was a gala performance at the theatre on the Wednesday, to compensate the ladies who were not invited to the Court reception.

It was decided at the last meeting that, upon the invitation of Sir Edward Grey, Secretary of State for Foreign Affairs, the seventeenth International Congress of Medicine should hold its sittings at some town in Great Britain or Ireland in the course of the year 1913. Great efforts must be made by the whole medical profession if this meeting is to eclipse, or even to equal, the one which has just been held. Better papers may be presented, but it will be extremely difficult to equal the politeness and the organisation which have been so conspicuous at the Buda-Pest meeting.

The Hungarians did wisely to extend an invitation to the medical profession and to hold this meeting in the capital. Buda and its neighbourhood contains many natural springs whose waters are known and used throughout the world. Personal inspection of the sources has quickened the interest of a large number of medical men in the waters, and has shown how natural they are and how carefully they are preserved from contamination. But the Congress has done more than this. It has shown to all who attended it a great nation in the making—

a nation united by a language difficult to acquire and yet of sufficient flexibility to render idiomatically the ideas of Herbert Spencer, of Conan Doyle; a nation of high ideals and filled at present with boundless enthusiasm. All promises well now, but it remains to be seen whether the nation as a whole possesses those powers of solid industry and dogged perseverance which have brought the Anglo-Saxons to the front, or whether the fatal inheritance of a long Oriental despotism, coupled with a fertile soil and a beautiful climate, will not prove a bar to the continued and strenuous exertion which alone can achieve the great purposes held in view by the present generation. Much still remains to be done. Kra von Krafft-Ebing's work is a little too commonly displayed in the shop-windows, there is a double monetary system in common use, and with a magnificent river flowing through the town rowing, as a sport taken seriously, is non-existent. So much has been done, on the other hand, within a marvellously short space of time, that the future looks almost assured, and if the authorities rule as well and as wisely during the next two or three generations as they have done in the past Hungary should become a great nation of which England may be proud, for she is modelling her constitution upon that of Great Britain. In this endeavour we heartily wish her success.

DERMATOLOGY.

BULLOUS IODIDE RASH.

THE fact that iodides and bromides may produce very troublesome and extensive skin eruptions is well enough known, but it is perhaps little recognised that these eruptions are not confined solely to a pustular or acniform type. The bromide rashes may be extremely puzzling sometimes, unless the thought of a drug rash happens to pass through the observer's mind. The same applies to the iodide rashes, one rare form of which is the bullous type, as in the following case:—

A young woman, aged 30, was under treatment by a non-qualified person, and she had been taking for three days a mixture prescribed by him. She then began to develop painful sensations in the skin of her face, forearms, wrists, and thighs, and then there came a reddish brown eruption of what were at first large papules, and which shortly afterwards developed into bullæ. A chemist was consulted the next day, and he ordered another mixture which the patient said had the same taste as the first. She took a tablespoonful of this, and half an hour afterwards she found her skin eruption to be rapidly spreading with the formation of fresh bullæ, and just previous to the eruption of each one of these there was a great deal of pain accompanied by a sense of burning in that area of the skin upon which the bullæ was about to appear. By that evening she was extensively covered with blebs upon her nose,

cheeks, chin, forearms, wrists, the dorsal surfaces of her hands and fingers, and the antero-internal region of her legs. In some places the fluid of the early blebs was beginning to dry up with the formation of crusts, but there was no formation of pus. The features were so distorted and disfigured as to be almost unrecognisable. The least pressure upon the skin produced so much pain that the patient cried out with it. The mixtures the patient had been taking were analysed, and both were found to contain potassium iodide. Apparently both the unqualified man and the chemist had assumed that the patient was syphilitic and ordered the same medicine. The amount of the salt that she had taken was by no means extensive however, averaging apparently about ten grains to the dose.

Bullous iodism of this kind is not to be seen every day, of course, but the case illustrates how very severe it may be, and how rapidly it may come on after the drug has been taken. The treatment consisted simply of stopping the medicine, some pills containing opium and extract of belladonna being prescribed for the relief of pain, the belladonna acting probably as a direct antidote to the iodism according to the teaching of d'Aubert. This is perhaps done by opposing the vaso-dilatation produced by the iodine. The recovery was rapid and complete.

HOSPITAL ADMINISTRATION.

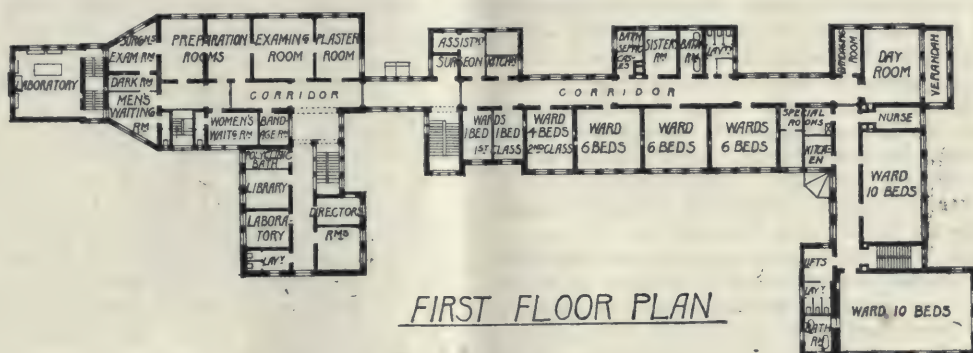
CONSTRUCTION AND ECONOMICS.

SOME MODERN CONTINENTAL HOSPITALS.

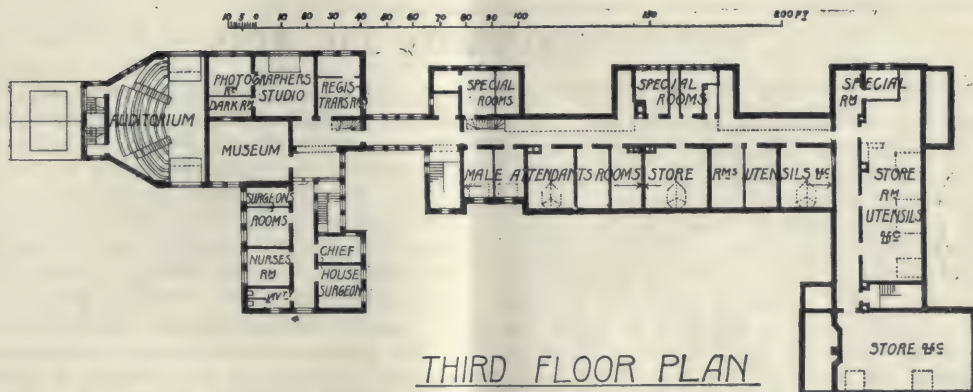
THE NEW SURGICAL CLINIC AT GREIFSWALD.

ALTHOUGH the small University centre of Greifswald cannot claim to possess an international fame, it can yet pride itself upon possessing one of the finest modern surgical hospitals. This is the new surgical clinic, which was completed in 1903 and has proved itself a thoroughly useful and efficient institution. Up to the date of its formal opening the surgical clinic had been located in the University Hospital, a building which was completed in 1856 and which was far from satisfactory in some respects. As it was recognised that the surgical division demanded a newer and better home, it was decided to give over

2,000 piles were driven into the ground, and on this a large platform was built on which the present buildings rest firmly. From the outside the new clinic presents a dignified and at the same time an attractive appearance, its red brick walls with cement facings and its tiled roof making it conspicuous, although there are no florid ornamentations and no attempt has been made to strive for great architectural beauty as in the newer Berlin hospitals. The large main front faces south, and the building consists really of two triple-storied blocks, one being the hospital itself, while the other serves for educational



FIRST FLOOR PLAN



THIRD FLOOR PLAN

this entire building to the medical department and to build a separate and entirely new block for the surgical side. All the plans and drawings were prepared in consultation with, and with the entire concurrence of, the chiefs of the surgical clinics—at first, in 1900, Professor Bier, and later on, when he accepted the call to Berlin, Professor Friedrich. Building operations were started in 1900 and completed in 1903. The clinic is unique in so far that it is probably the only German surgical hospital that is built on piles. This may at first sight justify a doubt as to the hygienic situation of the clinic, but we may point out that there are many hospitals which share this peculiarity, among others the fine institutions at Rotterdam, Amsterdam, and Venice. The architect cannot always claim the best site for his hospital; he has to use what is available. At Greifswald the only available plot for the new clinic was a piece of ground in which a firm foundation was only reached 21 feet below the surface. More than

purposes. The following plans will make clear the arrangement of the grouping in the hospital block.

Fig. 1 (Plan A) shows the ground plan of the ground floor. This is the male division, and it will be seen that the demonstration rooms, to the left, are sharply separated from the wards proper by a corridor. The first floor ground plan is identical, with a few alterations on the west side, for above the polyclinic is the large operating theatre, with a small aseptic theatre and various extra rooms. In the hospital division there is no change. The wards are similar and the grouping is as on the ground floor. This first floor is used for female patients. The ground plan of the top floor is shown in fig. 2. On the second floor are found the auditorium of the large operating theatre, the photographic studio, and the quarters of the assistants and divisional surgeons, together with the rooms for the attendants, which are, however, situated on the east side. On the basement are the septic

wards, with operating theatre, very full lavatory accommodation, and the usual extra rooms. On the second floor there is a large space reserved for a "sun-bath room."

A walk through the clinic shows the visitor that there is very little to criticise adversely. The institution is built on the corridor system, but the wards are so well lighted and airy that one hardly realises that they are separated on one side by a fairly wide corridor. Like all the modern German hospital wards they are scrupulously clean and comfortable, yet without any unnecessary furniture. The wards are floored with cement, covered by linoleum. In the operating rooms and lavatories they are of tiles. The ward walls are painted in a light colour; where necessary, as behind the basins, in the lavatories, and in the operating rooms, they are tiled to a distance of seven feet. Everywhere one notices the latest devices for preventing accumulation of dirt and dust. The window-frames and doors are rounded and close-fitting. What is specially striking is the excellent lavatory accommodation that has been provided. The cataract flush system is used and the waste-pipes are specially large and can be controlled at various points. In the polyclinic, as can be seen from the ground plan, the arrangement of the rooms is good, the male and female waiting rooms being separated by a corridor and lavatory. On the first floor a similar separation exists in the rooms attached to the operating theatre, there being separate male and female dressing, bandaging, and anæsthetising rooms. The apparatus rooms are found on the basement.

The clinic is heated by low-pressure steam pipes. The wards are heated and ventilated from below in winter, the heated air escaping through roof-ventilators. In summer natural ventilation suffices. In the operating rooms and theatre it is the only ventilation used. Water

is laid on from the city mains; hot water is provided by a special system of pipes which, emerging from the basement boiler-house, radiate all over the building and make it possible for hot water, at an equal pressure, to be tapped off in any room. The wards and corridors are lighted by means of gas pendants; in the operating theatre electric light is found. The electricity used in the various departments in the clinic is entirely derived from the town mains. A special distillation apparatus is in use which provides distilled water for each ward and operating room—a great convenience in a surgical clinic. This hot water distillator is capable of yielding 30 litres of distilled water per hour, and was fitted up at a cost of £23. A full description and details of it will be found in the official account of the clinic published in the *Klinisches Jahrbuch* (18th volume) for 1908.

The operating theatre is large and airy, and is one of the best lit and most practical of the many new theatres after the Breslau type which have been built in Germany. It is directly connected with the female wards by a central corridor, and indirectly with the male wards on the floor below by means of the lifts, which are all of the automatic electric type. With it are connected the anæsthetising and preparing rooms. The auditorium is large and well designed, and as a lecture theatre the room serves admirably. The instrument cupboards are tiled inlets into the walls, closed by glass doors in steel frames.

Apart from the special rooms and the septic wards, the hospital can accommodate about 100 patients. The cost of the site was 76,100 marks; the total cost of construction 482,300 marks; of equipment, 94,500. Without the cost of building site and equipment, the cost per bed works out at 4,820 marks: everything included, at approximately 6,500 marks.

INSTITUTIONAL NOTES AND NEWS.

NEW MANAGER OF THE LEEDS INFIRMARY.

THE Leeds Infirmary Board has appointed Mr. Fred J. Bray, of Leicester, to be the general manager of the Infirmary in succession to the late Mr. Thomas Blair. Mr. Bray has held the post of assistant house governor and secretary of the Leicester Infirmary for the past four years. There were 73 applications for the position, three of whom were selected by the House Committee and brought before the Board. The voting was ultimately in favour of Mr. Bray, who was elected. Mr. Bray has taken great interest in the Workpeople's Hospital Fund in Leicester, and it is claimed that in proportion to population Leicester has the largest collection from the workpeople in all England. A sum of no less than £12,000 is collected from the workshops. Mr. Bray will endeavour to take over his new duties not later than October 1.

A NEW CONSTRUCTION MANUAL.

MESSRS. WILLIAM HODGE AND CO., Edinburgh and Glasgow, have in the press and will shortly publish a work entitled *Construction, Equipment, and Management of a General Hospital*, by Donald J. Mackintosh, M.B., M.V.O., Medical Superintendent of the Western Infirmary, Glasgow. This comprehensive manual should be of the greatest value to medical men engaged in hospital work, or who may think of selecting hospital administration as a career. It will probably be of even greater value to architects charged with the construction or alteration of hospitals. Dr. Mackintosh, as is well known, has made a special study of the theory and practice of hospital construction and administration, and this book may be ac-

cepted as the latest pronouncement on this important and difficult subject. Besides plans of the most approved types of wards and auxiliaries the book contains over 60 carefully reproduced illustrations showing, *inter alia*, wards, operating theatres, laundry and special departments, all kinds of hospital furniture and requirements, etc. It anticipated that this book will become a manual for daily use among all public authorities that have the care of hospitals. The price of the book is 10s. 6d. net.

WESTMINSTER HOSPITAL.

THE governors have obtained a temporary injunction against the trustees of the Wesleyan Twentieth Century Fund. This injunction prevents the building of the Memorial Hall above the height of the old Aquarium until the result of the trial is known. It was pointed out that if the building were erected the light of many of the wards would be considerably interfered with, and the recovery of the patients thereby retarded. Anyone who has seen the models, erected to scale, can observe at a glance that the hospital is quite dwarfed, and the street between the two being so narrow, practically no light could enter the hospital on that side. What the result would be it is impossible to say, but that artificial light would be necessary in the daytime is certain, and no amount of compensation could compensate for the loss of light and air. It is hoped that the trial will be brought off as speedily as possible. By the will of the late Mr. Gorringe the hospital benefits to the extent of £50,000. The legacy is a portion of £400,000 left in trust for Mrs. Gorringe, which at her death is to be divided between eight charitable institutions.

THE HOPE HOSPITAL.

THE British Medical Association has advised its members not to apply for the position of resident medical officer at the Hope Hospital, Salford, and the recommendation so far has been followed. Dr. J. H. Taylor, hon. secretary of the Salford branch of the Medical Association, alleges that the general treatment of the medical men at the hospital had been intolerable, and that no doctor would go there as a resident officer "until the Guardians altered the whole of their conduct towards them." There are several grievances, but they seem to centre in this, that the Guardians, or some of them, are too meddling. "The medical men," Dr. Taylor told a representative of the *Pendleton Reporter*, "can do nothing right for the Guardians, who are constantly nagging." Mr. J. Bratherton, chairman of the Hospital Committee, told a newspaper representative that the action of the British Medical Association is placing the Guardians in an unfair position before the ratepayers. He repudiated the suggestion which has been made that there is any animus on the part of the Guardians against the retiring medical officer. "I deny entirely," he said, "that we are actuated by any personal feeling in resolving not to renew the appointment. With other members of the board I am now assisting the doctor's candidature for another appointment." Mr. Bratherton would not admit that the hospital was under-staffed, nor that the salary was too low. "When a shortage of staff was pointed out to us by the Local Government Board, the Guardians," he added, "remedied it immediately, and only at the last Committee meeting Mr. J. Lowry, the Local Government Board inspector, congratulated the members on the improvements that had been made. A month ago the Guardians agreed on an expenditure of nearly £3,000 for the better equipment of the operating theatre and the administrative parts of the institution."

NEW MENTAL HOSPITAL AT TOXTETH.

THE Toxteth Board of Guardians have just added to the Smithdown Road Workhouse two important blocks which are to serve as mental hospitals for 200 males and 100 females. Each hospital is two stories in height, and of neat and substantial design. The complete cost of both hospitals, including furnishing, fire mains, hydrants, and heating is about £20,000, or equal to £70 per bed. These are considered the cheapest hospitals of the kind built, taking into consideration the stability and the up-to-date sanitary fittings. The architect is Mr. Walter W. Thomas.

THE LATE REV. DR. DAWSON BURNS.

At the board meeting of the London Temperance Hospital, held on Tuesday, August 24th, the following resolution was moved by the Chairman, Sir T. Vezey Strong:—"That it is with a feeling of profound sorrow, and a sense of great and irreparable loss, we, the members of the board of management of the London Temperance Hospital, record the death, on Sunday, the 22nd of August, 1909, in his eighty-first year, of the Rev. Dawson Burns, the Honorary Secretary, our beloved friend and colleague. We recall with gratitude his long and devoted service to this institution, which, commencing on February 17, 1871, when he accepted the arduous post of honorary secretary of the provisional committee, continued in never-failing generosity until the day of his death, he taking an active part in the proceedings of the last board meeting on the previous Tuesday. The quality of his service was always of the best, ever enriched by his scholarly attainments, shrewd foresight, sound judgment, untiring energy, and lovable personality. His

removal by death involves the Hospital in a loss well-nigh inexpressible, and we, his friends, in a deep and sorrowful bereavement: a bereavement the pain of which is only mitigated by a knowledge of his short and painless illness, a realisation of his long, useful and devoted life, and the happy memory of many years of entirely felicitous comradeship. May it be ours to follow humbly in his footsteps, to strive to carry on the work of this Hospital, of which he was one of the principal founders, and in the establishing of which he devoted so many years of able and faithful service, and, generally, to further the cause of Temperance, to which he so unreservedly dedicated his life. To the members of his family we respectfully tender the expression of our heartfelt sympathy."

THE WORTHING HOSPITAL.

THE annual meeting of this hospital was held on August 27, Colonel A. Henty, J.P., presiding. Mr. Timms, in moving the adoption of the report, said the increase in the number of patients pointed to the necessity for the recent addition to the medical staff, and the institution would benefit by the appointment of four more medical officers. It was necessary that the public should realise that the number of patients increased every year, and that the expenses must go up in proportion. Subscribers should do their best to bring the institution to the notice of those who were not subscribers, and point out its benefits. Mr. F. W. Wink, in seconding, remarked that it was very satisfactory to find that the hospital was so generously supported by the employees of various firms in the town. Dr. Hinds referred to the proposal to provide a permanent memorial of the late Mr. A. H. Collet—for many years a member of the hon. medical staff. Mr. Collet had devoted a great deal of his time and energy to the institution, and it seemed very desirable that a suitable memorial should be erected. A new out-patients' department had been suggested, and this would be a most useful and fitting memorial, but the whole question was one of funds. The cost of the proposed out-patients' department had been spoken of as about £2,000. This might be somewhat in excess of the sum required, but at any rate the cost would be considerable, and it was hoped the public would respond generously to the appeal. Commenting on the statement of accounts, the Chairman said he thought the amount of the annual subscriptions was very small for such a charitable town as Worthing. The revenue from this source for the past few years had been £584, £576, £581, and, during the past year, £596. There was an improvement last year, and having regard to the sum raised in addition for the purchase of land, the support received was fairly satisfactory; but large sums were contributed to other objects, and in many cases sent away from the town, and he would like to see the amount subscribed to the local hospital increased by quite £1,000. At present the committee had to cut things very fine, and it was regrettable in a town of that size that this should be the position.

BOOKS RECEIVED.

JAMES MACLEHOSE AND SONS.

"Clinical Manual for the Study of Diseases of the Throat." By James Walker Downie, M.B., F.F.P.S.G. 10s. net.

JOHN BALE, SONS AND DANIELSSON, LTD.

"Blackwater Fever." By A. G. Newell, M.D., C.M., L.M., D.P.H. 5s. net.

KEGAN PAUL, TRENCH, TRÜBNER AND CO.

"The Book of the Golden Key." By Hugo Ames and Flora Hayter.

NEWS AND COMING EVENTS.

THE Royal Colleges of Physicians and Surgeons have acquired a site in Queen Square, Bloomsbury, London, W.C., for the new examination hall. The building on the Victoria Embankment has been sold to the Institution of Electrical Engineers.

THE St. Bartholomew's Hospital Old Students' Dinner will be held on Friday, October 1, in the Great Hall, at 6.30 for 7 p.m. Dr. Herringham will be in the chair. Tickets, one guinea each, may be obtained from Mr. H. J. Waring, the Hon. Sec., or payment can be made at the door. The new Pathological Department will be open for inspection after the dinner.

DR. H. D. ROLLESTON is orator for the day at the opening of the new session of the St. George's Hospital Medical School on October 1, 1909, at three o'clock, and will take for his subject "St. George's and the Progress of Physic." The oration will be followed by the annual meeting of the St. George's Club. The annual dinner will be held at the Prince's Restaurant in the evening, Mr. A. Marmaduke Sheild, F.R.C.S., consulting surgeon to the hospital, in the chair. Tickets may be obtained from the hon. secretaries, Medical School Dinner, St. George's Hospital, S.W.

IN connection with the death of Dr. Whitelaw, of Kirkintilloch, the *Glasgow Medical Journal* tells the following interesting story of his early career: "Being called up one night, many years ago, he was walking along with the messenger, when he was set upon and knocked down in a lonely part of the road. His pockets were rifled, and he was left lying on the road, with a fracture of the fibula. One of the articles stolen was a clinical thermometer with which he had that evening taken the temperature of a patient suffering from enteric fever. He remembered the temperature registered, also that he had not shaken down the mercury before putting the thermometer back in his pocket, and he communicated these facts to the police. Some time afterwards a thermometer registering the identical temperature was discovered in a pawnshop in Glasgow, and by this means the police were enabled to track the doctor's assailants, and to arrest them in one of the Glasgow theatres."

SIR STEPHEN MACKENZIE, F.R.C.P., M.R.C.S., died at the residence of his son at Dorking, Surrey, last week. Sir Stephen, who was a brother of the late Sir Morell Mackenzie, was born in 1844. He received his education at Christ's Hospital, the London Hospital, and at the Universities of Aberdeen and Berlin. He took his M.B. degree (highest honours and special honours for his graduate thesis) at Aberdeen in 1873, and his M.D. degree two years later. He became a member of the Royal College of Surgeons in 1869, and a member of the Royal College of Physicians in 1874; he was made a Fellow of the latter College in 1879. He was consulting physician to the London Hospital, the Poplar Hospital, and the Royal Ophthalmic Hospital, an ex-president of the Metropolitan Counties Branch of the British Medical Association, and was formerly Lecturer on Medicine and Pathology at the London Hospital Medical College. His publications include numerous articles in medical dictionaries and periodicals. Sir Stephen Mackenzie married in 1879 Helen, the youngest daughter of Mr. Benjamin Dulley, of Wellingborough, and had three sons and one daughter. He was knighted in 1903.

DR. ROBERT HAZELTON, of Oxford Gardens, North Kensington, W., and of Westland Road, Dublin, who died on June 29, aged 84, left estate of the gross value of £17,166 8s. 1d., of which the net personalty has been sworn at £17,085 5s. 11d.

DR. HENRY RADCLIFFE CROCKER left estate valued at £17,778 gross, with net personalty £15,328. He bequeathed to the Medical School of University College Hospital his drawings, sketches, diagrams, atlases, and books relating to diseases of the skin.

THE Medical Officer of Health for the borough of Southwark in his annual report states that the estimated population of Southwark at the middle of 1908 was 210,442. The death-rate was 16.3 per 1,000, as against 18.0 in 1907. The birth-rate, 28.1 per 1,000, was the lowest in the history of the borough. In 1900 it was 33.3 per 1,000. The infantile mortality was 13.1 per 1,000 births, the lowest figure ever recorded; much of this has been brought about by the disposition at the present time of mothers to breast-feed their children and by the Notification of Births Act, 1907. Of infectious diseases cerebro-spinal fever proved fatal in six cases. The number of cases of diphtheria was the smallest on record, and there was also a considerable reduction in the mortality from tuberculosis. The mortality is, however, still very high. The deaths from phthisis were 414.

DR. PAUL DORVEAUX has written a monograph on the history and employment of "silkworm-gut." The first mention of the use of the substance (which is really the "sericigenous organ" or silk-spinning tube of the silkworm) in Europe is to be found in Sir John Hawkins' (1760) edition of Walton and Cotton's "Compleat Angler" (Chapter XXI). It was then a novelty, just brought from China. In most European languages it is identified by a literal translation of the English title (*Seidenwurmdarm*, *intestino de gusano de seda*, etc.). Gariot, who wrote on buccal maladies (Paris, 1805), recommends silkworm-gut for dental prosthesis, and in 1813 George Fielding published, in the "Transactions of the Medico-Chirurgical Society of Edinburgh," an article "On the Use of a New Substance—Silkworm-gut—for Securing Divided Arteries." He was in search of a ligature "likely to be absorbed or dissolved in the animal fluids," when his assistant, E. Heseltine, made this suggestion to him. James Wardrop, another British surgeon, used it a few years later (1823) for the ligature of the carotid artery. In 1844 the "poil de Messine" or "crin de Florence" (other French names for the same substance) figures for the first time in the French Customs tariff, and "since Pasteur and Lister's discoveries" this article "at last occupies the prominent place which Fielding and Passavant had dreamed of giving it for surgical purposes." In 1891 it was mentioned in the "Real-Encyclopedie der gesammten Pharmacie," in 1893 in Dorvault's "Officine," and in 1906 in Martindale and Westcott's "Extra Pharmacopœia." Sir Robert Hart briefly alluded to the Chinese method of preparation in his description of the Ningpo exhibit at the Berlin Fishery Exhibition, 1880. China, Italy, and Spain are still the principal sources of supply for this substance. Dr. Dorveaux is well known as the distinguished librarian of the Paris Superior School of Pharmacy, and his monograph on silkworm-gut is a good instance of his erudition and very painstaking research.

SPECIAL precautions against the introduction of cholera are being taken by the medical officer at Hull. A notice has been issued stating that all tourists and passengers arriving from Rotterdam would be medically examined.

THE annual dinner of the Society of Medical Officers of Health will take place at the Criterion Restaurant, Piccadilly, W., on Friday, October 8, 1909. Ladies are to be invited as guests. Early application for tickets is desirable to Dr. Priestley, Lambeth Town Hall, Brixton Hill, S.W. (single, 7s. 6d.; double, 15s.—without wine).

MR. H. COLBORNE, M.R.C.S., who for 30 years has rendered valuable service as borough meteorologist of Hastings, was recently the recipient of a valuable marine chronometer, together with a cheque. The chronometer bore the following inscription: "Presented to H. Colborne, Esq., M.R.C.S., in appreciation of 30 years' service as Borough Meteorologist of Hastings, August, 1909."

THE death is announced of Dr. John Bowes, who had practised at Herne Bay for the last 50 years. Dr. Bowes entered Guy's Hospital as a student in the early 'fifties, and afterwards became a member of the Royal College of Surgeons and a Licentiate of the Royal College of Physicians. He was an ex-president of the East Kent and Canterbury Medical Society, a Fellow of the Zoological Society, and a justice of the peace for the county of Kent. He was 75 years of age.

THE total number of deaths from cholera at Rotterdam since August 20 is now eleven, and there are three new cases. All the cases have been caused by the use of impure river water. The total number of patients is 11, and 90 persons are under observation. The militia, who were summoned for their usual drill, have now received orders to remain at home. There have also been two deaths at Gorinchem and Arnhem.

THE Polyclinic and Medical Graduates' College, Chenies Street, W.C., will open for the Autumn Session on Monday, the 13th inst. The usual afternoon clinics will commence on the day following, and will be continued according to the plan followed in previous sessions. A special vacation session of practical classes has been arranged to extend from Monday, September 13, to Friday, October 1. Entries for these classes should be made at an early date. Practitioners who join the College as subscribers on or after the 13th inst. are free from all further subscription until January 1, 1911. A complete programme of the Autumn Session is now ready, and can be obtained on application to the Medical Superintendent, 22 Chenies Street, W.C.

THE death was announced on August 22 of Dr. Radcliffe Crocker, F.R.C.P., at Engelberg, Switzerland. Dr. Crocker was an honorary member of the American, French, Austrian, German, and Italian Dermatological Societies, physician to the skin department of University College Hospital, and a Vice-President of the British Medical Association. He revised the Dermatological Catalogue which is in use at the Museum of the Royal College of Surgeons at the special request of the Council, whilst his many publications include valuable additions to the standard works on skin diseases, chief among which may be noted a treatise which ran into the third edition, and an atlas on the same subject. Dr. Crocker married in 1880 the daughter of Dr. Fussell, of Brighton, who survives him.

AN action brought in Edinburgh against the Edinburgh Hospital and Dispensary for Women and Children, to recover £100 damages in respect of injury through being burned on the leg by a hot-water bottle while under the influence of an anæsthetic in the said hospital, has resulted in the claimant being awarded £25 damages.

THE resignation by Mr. N. W. Bourns, M.R.C.S., L.R.C.P., is announced of his post as Anæsthetist to the Cancer Hospital, Fulham Road. Mr. Bourns has held this appointment for twenty-six years, and his connection with the institution as House Surgeon and Registrar dates back even further still.

MICHAEL SERVETUS who was martyred by Calvin, is to have a statue at Vienna in Dauphine in the Department of Isere. Servetus was, perhaps, the first to describe, more or less accurately, the lesser circulation. His book which contains the theory was published at Vienna in 1543. It is entitled "Christianismi restitutio," and, like his "heretical" work "De trinitate erroribus," is a bibliographical rarity.

THE Humbert I. prize, for the best treatise on or best discovery in the realm of orthopædics offered by the Instituto Rizzoli, Bologna, is now open to competition. The prize is of the value of 3,500 lire, and the competition is open to all qualified men. Particulars may be had on application to the Director of the Instituto Rizzoli, G. Bacchelli, S. Michele in Bosco, Bologna.

M. CLEMENCEAU, the former French Prime Minister and a retired member of the medical profession, is credited with the intention of producing this autumn a play founded on his novel, *Les Plus Forts*, which was published ten years ago. According to various journals, M. Tarride, who is taking over the Renaissance Theatre from M. Guityry, will produce the play.

ON August 26 the mayor of Rotterdam made a reassuring statement in the Town Council with regard to the outbreak of cholera. No further deaths have occurred, but over forty people are under observation. It is supposed that the cholera was caused by infected ballast or tank-water taken in by timber-ships at Riga, St. Petersburg, or Kronstadt, and discharged by them at the mouth of the Meuse before being disinfected at the port of Rotterdam.

IN the House of Commons Captain Craig asked the Secretary of State for the Home Department whether his attention had been called to the increase in recent years of the sale of quack medicines; whether he was aware that it had been proved that such nostrums frequently contained nothing but harmless drugs, coloured grease, coloured water, small quantities of aloes, pilules of sugar, etc., though advertised to cure a multitude of different maladies; whether he was aware that the chief cost of such quack medicines was in the advertising; and whether he would appoint a small Commission to inquire into and report upon the whole subject? Mr. Secretary Gladstone, in a written reply, said: I understand that inquiries are being made, at the instance of the Lord President of the Council, as to whether the practice of medicine by unqualified persons is extending, and as to the effects produced by such practice. These inquiries will no doubt throw some light on the question of the use of quack medicines, and I think it will be advisable to await their result.

NEW APPLIANCES AND THINGS MEDICAL.

[We shall be glad to receive at our Office, 28 & 29 Southampton Street, Strand, London, W.C., from the manufacturers, specimens of all new preparations and appliances.]

A LIQUID SANITARY SOAP.

It is often very useful in hospital work, and still more in what may be termed extra-hospital work, to have a substance that combines the properties of cleansing, as the good housewife understands it, with those of disinfecting, as the modern surgeon understands it. "Carbolacene," a sample of which has been sent us, and which is made by Messrs. W. and F. Walker, Ltd., of Water Street, Liverpool, claims to combine those advantages. It has been put to severe tests by several eminent men, including Dr. Carl Enoch, the chemist to the Chamber of Commerce of Hamburg, Dr. George Tate, Dr. Edgar Flinn, and Dr. Leon Bertrand. Sir Charles Cameron also mentions that he has used it at Dublin. The substance is made in the liquid form, and dissolves very easily in water. The usual strength is $2\frac{1}{2}$ per cent. A rough and ready proportion recommended by the makers is—a cupful of "Carbolacene" to a bucketful of water. In preparing large quantities for use, one gallon of the liquid soap is used with forty gallons of water. It is claimed that it cleanses and disinfects clothes, carpets, blankets, etc., and it can be used for washing paintwork, floors, also in lavatories, drains, stables, etc., and for washing animals. It also possesses antiseptic properties. It can be employed for washing clothes without the addition of soap, for the combined purpose of thoroughly cleansing and disinfecting at the same time. Dr. George Tate, in his report, states that after submitting it to chemical and bacteriological tests, he finds it both a detergent, a disinfectant, and non-corrosive. Dr. Carl Enoch states that it kills the germs of cholera, typhoid, typhus, and carbuncle, the cholera microbe being killed in five minutes with a 2 per cent. solution. It is sent out in five, ten, and twelve gallon drums, twenty gallon kegs, and forty gallon barrels.

AN ARTISTIC AND ASEPTIC ENAMEL PAINT.

In the group of enamel paints, called by Messrs. Jensen and Nicholson, of Stratford, London, E., "Robbialac," the makers have endeavoured to produce the same artistic results as were obtained by one of the great artists of the Middle Ages, Della Robbia, by the aid of the modern chemist. The modern construction of hospitals demands that the walls of wards, staircases, and, in fact, of every part of the building, shall afford no home for germs; or, in other words, no home for dust, and that there shall be no cracks in which dust can lodge. As a corollary of this, it is necessary that the wardmaid shall be able to apply a brush vigorously, with copious supplies of water, to every part of the walls without affecting the decorations. Further, modern sentiment demands that in place of the somewhat gruesome patterns that were common upon hospital walls in days gone by, patients shall have something pleasing to look upon. In "Robbialac" all of these objects are attained. The roughest and most imperfectly built wall can have its pores and cracks effectually filled by the preliminary "stopping," the wall being well rubbed down after. The second coat, called by the makers "Matt," which has a certain amount of elasticity, provides a bed for the final coating, "Robbialac" proper, which gives the beautiful glossy enamelled surface that is so pleasing to the eye and so effective against bacilli. It is claimed that "Robbialac" is at least as inexpensive as other paints, one gallon being

sufficient to cover 100 sq. yards, at the same labour cost as with ordinary paints. It is made in all standard and art colours, and the makers keep a permanent staff of chemists who are able to produce any new colour that may be desired. It has been used, among other places, for the City of London Lying-in Hospital, for the City of London Guardians' Office, and for his Majesty's new yacht.

ALLSOPP'S LAGER.

(MESSRS. ALLSOPP AND SON, Burton-on-Trent.)

We have received a sample of this lager beer. In the report of THE HOSPITAL's Commission on Beer and Stout we gave a full account of the technique of lager-beer brewing, and showed in what way it, and the beer thus produced, differ from ordinary English brewing and English beer. The investigations of the Commission included a visit to Messrs. Allsopp's lager-beer brewery and an examination and analysis of their bottled lager beer. Those who are interested in this subject will do well to read the report in question if they have not already done so. All that it is necessary to say here is that we think lager beer is, from the medical standpoint, to be recommended as a good dietetic beverage. It is lighter in alcohol than ordinary English beer, and yet has a good thirst quenching consistency. We further think that for home consumption—lager beer manufactured in this country is preferable to that imported from abroad. Messrs. Allsopp have succeeded, by great care in the choice of original materials and the greatest attention to brewing technique, in producing a lager beer equal to any imported article and entirely free from all kinds of chemical preservatives. We think this product is thoroughly to be recommended.

THE STRAND PALACE HOTEL.

THIS, the newest hotel in London, presents many features of interest both from an administrative and from a constructive point of view. Standing on a fine central site, on the spot where formerly stood Exeter Hall, it has a comparatively small frontage, which hardly gives a fair impression of the size and palatial outlines of the building itself. There are 470 bedrooms, all comfortably furnished and with hot and cold water laid on. Special attention has been paid to the ventilation of the hotel. The whole building is warmed by means of radiators in winter, ventilation being ensured by electric-driven fans and extractors, and the fresh air supplied being previously washed by being drawn through running water. This, we believe, is the first time the system has been applied to a London hotel, and its results are to be appreciated by visitors who make use of the Strand Palace during the foggy winter days. Adequate fire provision is ensured by fireproof partitions screening the various corridors, and the whole building is practically fire-resisting. A water reservoir with a capacity of 60,000 gallons is provided as a reserve on the roof. From a hygienic point of view the construction of the new hotel leaves nothing to be desired. The building will be opened to the public early next week, and the management offers many attractions to the public. Not the least of these is the "no tip" system which is to prevail—an innovation which will have the cordial support of the majority of visitors.

NURSING ADMINISTRATION.

THE HOLT OCKLEY SYSTEM.

II.—IS IT ECONOMICAL?

WE have examined the working of this system from the point of view of the nurses and of the patients. We have seen that the nurse suffers under it in two ways, first, from being imperfectly instructed in her duties, a fact which cannot fail to be of detriment to her in her subsequent career, since in the majority of cases she does not remain a Holt Ockley nurse; secondly, in the circumstances under which she is required to work, residence in the patient's cottage leading to unnecessary hardships in her food and surroundings off duty. Before deciding whether the advantages of the resident nurse overbalance the drawbacks it may be well to consider the financial aspect of the question. Is it more or less of a charge on the patients? Is it more or less lucrative for the nurse? Is it more or less costly to the subscriber?

1. *The Patients.* The rules of the Cottage Benefit Association prescribe that "the services of the nurse must *never* (the italics are not ours) be given gratuitously." It thus becomes apparent that a wide range of cases such as chronics, bad legs, ailing babies, and the like, in which district nurses are able to bring comfort and instruction into the home, are altogether excluded, for poor people are not as a rule able to pay for a resident nurse to tend such cases. "The rate varies according to the class of patient, in some cases ranging as low as a 2s. annual subscription, plus 2s. per week while the nurse is actually employed. Board and lodging for the nurse must in every case be provided by the patient." These are apparently the minimum charges, and reckoning that the nurse's board will cost from 5s. to 7s. a week it results in a charge of from 16s. to 18s. for the fortnight, in addition to the doctor's fee of a guinea, for these nurses are rarely midwives. A district midwife would deliver the mother and give attendance for ten days, night and morning, for 10s. 6d. (in some localities 7s. 6d.), and in addition to her care of the mother during this period would probably visit and advise at intervals for several months previous to the confinement, and keep an eye on the feeding of the baby afterwards. To balance that, the mother would be obliged to get a neighbour or relative to come in for a few hours daily, and for this would probably pay 5s. a week. For cases other than midwifery, there would probably be no charge for a district nurse's services, though an annual subscription would very probably be required as in the case of the Holt Ockley nurse, or a donation for services be encouraged. It is very evident that the district nurse is cheaper for the poor, that she covers a range of work altogether left out of count by the Holt Ockley nurse, and that in so far as she omits certain duties which the Holt Ockley nurse performs, those duties are capable of being satisfactorily undertaken by unskilled women, who are able to learn a good deal from the nurse.

2. *The Nurses.* It is rather difficult to ascertain exactly what the nurses get on this system. In addition to free training, they are paid a salary of from £20 to £25 a year, the patients supply them with board and lodging while they are at cases, and "when out of work the nurse boards herself, lodging being usually provided by the association." The rate of pay is not high, but neither are the qualifications. Their expenses must vary considerably according to the amount of work, and according to the extent to which they find it necessary to supplement from their own purse the board provided.

3. *The Subscribers.* We have before us the report and statement of accounts issued by the Stratton Audley Benefit Nursing Association, a typically well managed branch employing Holt Ockley nurses. It embraces fourteen hamlets, and the number of "benefit subscribers" in these places amounts to a total of 208, the payments varying from 6d. to 10s., with an average of about 2s. Four nurses were employed, whose wages amounted to £108 16s. The number of cases nursed was sixty-three, of which thirty-five were confinements. The report states that "every nurse costs the Association at least 14s. 6d. per week, so that even the fees paid by Classes III. and IV. do not nearly cover the cost of the nurses, and in Classes I. and II. the deficiency amounts to 12s. and 11s. a week." The total expenses of the association nursing these sixty-three cases was £146 7s. 10d., being an average cost of £2 6s. 5d. per case. If it be reckoned that each case lasted on an average a fortnight, as seems to be indicated in the report, a district nurse paying two visits a day would have attended 1,764 times, and at an average cost of 1s. per visit, which few nursing associations exceed, would have cost £88 4s. There is in fact an inevitable waste of nursing material in the system. Two mothers may be confined within a short distance of each other and each will be absorbing the whole time of the nurse. As many as six nurses have been known to be employed in one locality doing work which one midwife could have managed with ease. The loss to subscribers is very considerable. The Cottage Benefit Association takes its stand on the necessity for making all do their part, and determines the status of every person in the parishes within its scope for the purpose of seeing that everyone bears his share. But when it results in charitable subscriptions being required to cover a deficit amounting on an average to over £1 on each case (reckoning their duration at a fortnight) the subscribers may begin to wonder whether after all the work even begins to be self-supporting. Might it not be wiser to leave the patients to arrange about their housework for themselves, a matter they can perhaps do better independently, and provide at a far lower cost that highly specialised aid in sickness which a thoroughly trained nurse alone can afford?

APPOINTMENTS.

THE Dundee Parish Council has appointed Dr. Eric A. Thomson, of Arbroath, medical officer of health.

DR. C. M. L. COWPER has been appointed certifying surgeon under the Factory and Workshop Act for the Aarnesby district of the county of Leicester.

DR. BERTRAM GEORGE BELAS, of Dublin, has been appointed second assistant resident medical officer by the Portsmouth Board of Guardians.

THE Staffordshire Education Committee has appointed Miss Alice W. Maclean, M.B., Ch.B.Glasg., additional assistant medical inspector. There were thirty-three applicants for the post.

DR. SCHOFIELD, medical officer to the Ravensthorpe district of the Dewsbury Union, has been appointed school medical officer of Preston, and Dr. Pearson, of Dublin, has been appointed to succeed him at Ravenshorpe.

It is officially announced that Dr. Thomas H. Bryce, lecturer on anatomy at Queen Margaret College, has been appointed to the Chair of Anatomy at the University of Glasgow in succession to Professor Cleland. The new professor is M.A., M.D. (gold medallist), of Edinburgh University, and a Fellow of the Scottish Royal and Antiquarian Societies. He is the author of the section Embryology in the eleventh edition of Quain, and has written many treatises and papers on anatomical subjects.

THE following gentlemen have been selected as house officers at St. Thomas' Hospital from Tuesday, September 7, 1909 : Casualty officers and resident anaesthetists : W. B. Johnson, M. L. C. Irvine, E. W. Witney, C. T. V. Benson, C. D. H. Corbett, and B. A. Cheadle. Casualty assistants : H. Bowring and C. Goulesbrough. Resident house physicians (from August 24, 1909) : M. W. Baker, L. B. Perry, L. S. T. Burrell, H. B. Wilson, and G. E. Thornton. Resident house surgeons (from August 24, 1909) : J. B. Mennell, G. B. Wainwright, W. Harmens, and R. Cox. House surgeon to block 8 : W. R. Bristow. Obstetric house physicians : (*Senior*) P. T. Harper, and (*Junior*) E. L. Fyfe. Ophthalmic house surgeon : E. M. Parsons-Smith. Clinical assistants : (*Senior*) W. Ibbotson, B. C. Maybury, J. C. Marklove, J. S. Hopwood, W. Ibbotson, F. J. Aldridge, J. L. Graham-Jones, and F. C. Pridham.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR THE WEEK, SEPTEMBER 13 TO 18.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

Sept. 13. College re-opens.

At 4 p.m.

Sept. 14, Dr. R. Hutchison, **Medical.**

Sept. 15, Mr. Arthur Edmunds, **Surgical.**

Sept. 16, Sir Jonathan Hutchinson, **Surgical.**

Sept. 17, Dr. William Hill, **Ear, Nose, and Throat.**

DR. WAUGH, district medical officer for the Skipton sub-district, has resigned. Dr. Waugh is leaving the district, and has also resigned his appointment as medical officer to the Skipton and District Infectious Diseases Hospital.

DR. LITTLEJOHN, medical superintendent at the Hanwell Schools of the Central London School District, has resigned. He has held the position since 1870. The managers have resolved to accept the resignation with regret, and to send a letter of sympathy to Dr. Littlejohn, whose retirement is due to a breakdown.

FOUR children died recently at Rotterdam. Their deaths, at first supposed to be caused by the eating of poisoned sweets, are now proved to have resulted from Asiatic cholera. The body of a sea captain whose death had given rise to suspicion has been delayed burial in order that an examination may be made. About twenty-five persons, of whom fourteen are children, are under observation. Stringent measures have been taken by the authorities to prevent the spread of the disease.

THE Sevenoaks District Council having recently appointed an official of the Royal Society for the Prevention of Cruelty to Animals to act as "honorary sanitary inspector," the National Federation of Meat Traders, acting at the instance of the butchers of the locality, took counsel's opinion on the appointment. This opinion is to the effect that the appointment is illegal, and in these circumstances the federation has called upon all meat traders in Sevenoaks to refuse admission to their premises to the honorary sanitary inspector. At the same time the local butchers are advised to allow members of the local authority to visit and inspect their premises. Pending the return of the Sevenoaks District Council, which is now on vacation, the honorary sanitary inspector has been written to and requested not to make any visits until the council meets and considers the protest of the federation.

THE BEST NATURAL APERIENT WATER.

Hunyadi János

For LIVER COMPLAINTS, OBESITY, &c.

The "VIENNA MEDICAL PRESS" says:—

"Hunyadi János may be regarded as a specific for obesity."

AVERAGE DOSE.—A wineglassful before breakfast, either pure or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

The Hospital

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SATURDAY, SEPTEMBER 18, 1909.

THE STATE MEDICAL TREATMENT OF SCHOOL CHILDREN.

ONCE the principle is accepted that the State owes it to the children of the poor, whose education it provides for, to examine into their state of health, it logically must follow, as the night the day, that the State thereby incurs a further obligation towards its elementary scholars. This duty it owes not only to the school children in general, but also, to some extent at least and in certain cases, towards the individual child. Medical treatment, upon some organised plan, is an inevitable corollary to State-directed and State-supported medical inspection of elementary school children. In this respect it differs from the ordinary Public Health Service. The latter presumably can well continue to depute medical treatment, wherever its officers hold this to be necessary, to the general practitioner, to the Poor Law medical officer, or to the hospital—at least until the hypothetical future time when the entire medical profession is reorganised upon Socialistic lines, in some such manner as was indicated in an article contributed to these columns last year, upon the “Socialisation of the Medical Profession.”

As was pointed out in the *Times* of September 6, 1909, the State has indeed step by step assumed a parental attitude towards the children of the poorer classes of this country. State medical inspection, and State medical treatment of some sort follow naturally upon the provision by the State of compulsory education. Moreover, the grotesque absurdity of forcing school-work down the throats of children whose most urgent need at the moment is food, has already brought the question of State feeding of elementary school children into the category of difficult and anxious problems of public policy. This of course is not the place for an expression of opinion upon the wisdom or necessity of the assumption by the State of a parental attitude, beset with increasing obligations, towards the children of the million. The State, wisely or unwisely, and in the best or in the worst interests of the lower classes themselves, has already undertaken a position towards the children of the poor, which places it very much *in loco parentis*. Thus we are left to consider at the moment merely the question of how the State, its obligation in this matter already incurred, may best deal with the

problem of the State-aided and State-directed medical treatment of its elementary school children. This question has already been referred to in our columns, and we have previously noted the division of expert (and pseudo-expert) opinion into two divergent branches. The one camp advocates, in a word, a compromise between the State and the hospitals; the other desires the establishment of “school clinics,” a term which explains itself.

Now the Education Committee of the London County Council, as we remarked at the time, clearly showed by its manner of approaching various London hospitals this year, with a view to an extension of their practice in this direction, that they favoured the less drastic and revolutionary method of treating the physical defects discovered during the medical examination of London elementary school children. They seemed to shrink from the idea of the “school clinic.” As was to be expected, their action and their supposed motives gave rise to considerable comment and not a little criticism amongst students of social policy and administration, amongst hospital authorities, and amongst those medical men who are interested in such questions. The British Medical Association, following a discussion of the matter at its recent annual meeting at Belfast—which produced a resolution regretting the line adopted by the London County Council—has now taken action in favour of the “school clinic” idea; and it will be interesting to see what the effect of its public partisanship will be. It should be stated that the County Council since circularising certain London hospitals and publishing an abstract of their replies earlier in the summer has now made arrangements with some of these institutions for the treatment of a few of its youthful charges; and this action forms the basis of the British Medical Association’s indictment. The Belfast resolution regretted the action of the London County Council and urged the medical staffs of hospitals to obstruct this threatened abuse of voluntary charity—which moreover provides inadequately for a public evil. The resolution has now been supplemented by an exposition of the grounds upon which it is based, and has, we learn, been forwarded in official form by the British Medical Association to the President

of the Board of Education. Copies have also been sent to the authorities, lay and medical, of the hospitals of London, and to the entire medical profession practising within the metropolitan area. Since some organised, far-sighted, economical method of treatment seems inevitable, and in many ways desirable, the "school clinic" system certainly appeals far more to us, as a practical business measure, than does the other. "School clinics" have already, it would seem, established

themselves on a sound footing in various parts of Germany—that country of municipal administration and social progress; whereas the method favoured by the L.C.C. Education Committee, however well it might work at first, must surely grow out of hand as time passes and lead to endless difficulties, abuses, and complications. Therefore we await with interest the result of the Association's manifesto, and express ourselves in sympathy with its objects and its main principles.

THE INTERNATIONALISATION OF GRADUATE STUDY.

If the recently held International Congress of Medicine has accomplished nothing else besides the formation of an international committee to look after the interests of graduate students at the various centres, it will have achieved a measure of success which none of its predecessors can be held to have exceeded. For, in a sense, the resolutions which were direct results of Professor Kutner's eloquent appeal for the internationalisation of graduate study mark an epoch in the advance of the graduate study movement. It is, therefore, gratifying to find that England is adequately and worthily represented on the committee that has been formed, and it is sincerely to be hoped that in the near future her representatives will prove, by their energetic support of the various steps that will have to be taken to make the committee an effective practical working organisation and not a mere theoretical nucleus, that they are fully alive to the importance of the graduate study movement. The appointment of this International Committee is the realisation of a splendid hope that Professor Kutner, who has so whole-heartedly worked for the interests of the post-graduate student, expressed several years ago on the occasion of the opening of that magnificent institution on the Luizenplatz, which is the palace of post-graduate study on the Continent. No one who has followed the movement and its various phases—the keen, interested activity of America; the State-supported enthusiasm of Russia; the quiet, serious endeavours of Italy; and the sporadic, isolated attempts of Austria and France—can have failed to be struck with the fact that hitherto England has done comparatively little in the matter of graduate study. At the same time, while that reflection is disheartening, it is an encouraging sign to notice that such graduate-study institutions as we possess are, so far as they go, among the best of their kind. With all their limitations they serve a useful purpose, and, we believe, are growing in popularity. That is as it should be. The graduate-study movement, as we have more than once pointed out, is a matter of national importance, and the sooner the public

realises that there can be no finality in the education of members of so catholic a profession as that of medicine, the better it will be for the graduate movement in England. It is perhaps not yet superfluous emphatically to protest against the short-sightedness that sees in post-graduate work a sign of ignorance or of inferiority in the student. That is an opinion still, unfortunately, held by many, and it needs continual protest and opposition to be eradicated. There can be little question that the formation of this International Committee will do much to dispel it by showing, not merely the members of the profession—who are fully alive to it—but the public at large, that it is imperative for the doctor to be a student all his life long. Nor can it be doubted that the committee will do much good work in drawing the attention of the profession to the need for better organisation and greater centralisation of the movement in England. The mere fact that such a committee exists and that it is representative and active will greatly further the cause of the graduate student in this country. There is much work for the committee to do, and it will be interesting to notice how that work will be dealt with and approached. Germany is fortunate in possessing enthusiasts, such as Professor Kutner, who have thrown themselves heart and soul into the movement and who have accomplished success after years of hard endeavour. In America the movement is on a sure foundation, its institutions endowed and possessed of a reputation which is equal to that of our best-known general hospitals. Elsewhere, too, in Russia and Italy, the profession as a whole has shown that it is profoundly interested in what is being done. It remains for England to show what can be done here. The newly-appointed committee will have to make the graduate facilities that are offered by each country available for all countries; and it is imperative, therefore, that it should find the facilities that are offered by institutions in this country such as are worthy of being recommended to the attention of graduate students the world over.

ANNOTATIONS.

Medical Fees at Inquests.

AMONG the many small points which may well engage the attention of the Commission, now sitting with regard to amendments in the Coroner's Law, some revision of the scale and method of distribution of fees to medical witnesses at inquests is of some importance to members of our profession. There is certainly room for improvement, for the present system is anomalous in several respects and frequently inflicts injustice. At the Wood Green Coroner's Court last week an old grievance arising out of the present state of the law was ventilated by a medical witness, and the Coroner expressed himself in sympathy with the medical man's contention. After attending the patient, upon whose body the inquest was held, for a fortnight, in his capacity as an honorary medical officer to the Wood Green Hospital, the medical practitioner was called upon to give evidence in the Coroner's Court without payment. Thus the medical witness in this instance, although in private practice, was forced by the law into the same position as that of a house officer who is called to give evidence at the inquest upon a patient who has died in a hospital with a resident staff. The medical practitioner said with some justice to the Coroner that, while his hospital services were a labour of love, his attendance at inquests was quite another matter. Resident medical officers have so long accepted the inevitable, that gratuitous evidence at all inquests, except upon persons brought in dead to hospital, scarcely now provokes even private comment; and it is very seldom that general practitioners attending local hospitals, or the consulting officers of larger institutions, make public complaint when compelled to attend without remuneration the inquests upon their hospital patients. But although silent resentment at petty injustice, and apathy over minor professional grievances, are common objects of our calling, and are perhaps in keeping with the dignity of the profession, it is still just as well, especially when a Commission is sitting upon the whole matter of the law relating to Coroner's inquests, that a voice should be raised to protest against anomalies of this sort which would easily admit of reform. No doubt the present method of remuneration was founded on principles of economy and upon some measure at least of common sense; but modifications could well be made which would secure equity without waste of public money, and the Wood Green Coroner hinted that the present Commission would probably see that this is done.

Pure Consultants.

HONOUR and profit, says Aristotle, are as a rule incompatible: whoever enjoys the first must not hope for the second, and *vice versa*. That there is more than a gleam of truth in this in reference to the

practice of medicine is a fact which has come home lately to a rather large number holding honorary hospital appointments in London. The present (it is to be hoped, only temporary) waning in prosperity of the metropolitan medical schools, which was recently part of our text, together with the ever-growing encroachments on the old, wide province of internal medicine made by surgeons, bacteriologists, specialists of all kinds, radiographers, and radiotherapists, have caused lucrative medical consultative practices to be few and far between. Quite a long time ago now it was said that whereas the physician used to arrive at the hospital door in a carriage and pair, while the surgeon trudged up on foot, their positions have become reversed. The passage of time has certainly not falsified this humorous putting of the case; and perhaps the future has in store the immunisator in a flying machine fitted up with a miniature laboratory. Then, too, in one or two quarters attempt, perhaps not highly successful, has been made to introduce some form of the curious practice in regard to fees known as dichotomy. It is, however, probably only coincidence that just lately, when emoluments have declined, a disposition should have been shown to stickle for the full honours attaching to the consultant status. Of course this can only affect London, because in the provinces there can scarcely be more than a few consultants undefiled by general practice, although probably Liverpool and Manchester and Birmingham and the rest are no great sufferers thereby. However, the proposal to mark the distinction more strongly seems, on the Aristotelian principle already quoted, to be equitable enough. There is danger, maybe, of casting by implication a stigma on the non-consultant. An opinion shows itself now and again that, as regards research, no good thing can come out of the Galilee of general practitioners. This does not matter so much (since, if truth is present, it must prevail) as what often goes along with it, namely, an easy tolerance of bad things of more fashionable origin. The lesson that the writer of *Confessio Medici* conveyed by the certainly adequate metaphor of Dædalus and Icarus was not unnecessary; and if practical failures in the higher branch of medical practice are to be regarded as oracles it will not be a good thing at all. After all, what the community wants of its doctors, as it wants of all classes of its members, is service of the general practitioner, plenty of sympathy with the sick and all-round ability in treating the common run of diseases; of the consultant, that he should be good at difficult cases—his strong point, like that of Mr. Shaw's Q.C., must be being right when other folk are wrong. And what it looks for from the research worker is results—news, a real advance, something novel; not academically correct proof that such-and-such a guinea-pig gave a positive reaction. Ability to furnish results, whether clinical or investigatory, should be recognised wherever it exists: hack-work is hack-work whoever did it, and however well it is done.

MEDICAL OPINION AND MOVEMENT.

LESIONS of the Optic Nerve as an early sign of Disseminated Sclerosis forms the subject of an interesting contribution to the *Archives of Internal Medicine* by Dr. A. Gordon. In the last seven years he has had 56 cases of this disease under his observation, and in 23 of these, or 41 per cent., lesions of the optic nerve were present. This would appear to show a much more frequent occurrence of optic nerve lesions than is usually experienced in this disease, but the chief point of interest lies in the fact that according to the observations of Dr. Gordon this lesion was in a certain number, and probably in a large number of the cases, the first and for some time the only sign of the disease. In 18 of the 23 cases all the typical symptoms of the disease were already established, together with optic atrophy or retro-bulbar neuritis, but in eight of them, by a close questioning, the author was led to the conclusion that some sort of vision trouble formed one of the earliest signs of the disease. In the remaining five cases the author was able to observe the onset of the disease with ocular affections, and in three cases has watched the subsequent development of the malady, although the classic symptoms did not appear for some time afterwards—in one case four years, in another two years, and in the third six months. The indefinite and insidious way in which this disease progresses in the early stages is already well known, but that it may be ushered in by a lesion of the optic nerve in this way is a noteworthy fact.

YET another fact bearing on the *Ætiology* of Optic Nerve Affections is brought out by Dr. J. Van de Hoeve, namely, the possibility of infection from the nasal sinuses. He publishes a case in which he was able to observe the development of an optic neuritis first on one side and then on the other, and by appropriate treatment was able to arrest the disease. The case is well worthy of record in point of diagnosis and also treatment. The patient, aged 24, first noticed that the vision of his left eye was defective, and consulted an oculist, who diagnosed retro-bulbar neuritis, and in the absence of any apparent cause supposed it to be specific. No good resulted from mercurial treatment, and Dr. Snellen was consulted. Visual acuity of left eye was then only 3/60, and there was a central scotoma. Inflammation of the sphenoidal sinus or posterior ethmoids was suspected, especially as the speech was somewhat nasal. Rhinoscopy revealed nothing definite. The right eye also became affected, and visual acuity was only 1/2. On both sides there was an atrophic sector of about 120° on the temporal side of the papilla, and on the left a central scotoma for white and all the colours except blue; on the right side there was considerable extension of the blind spot for most of the colours. The sphenoidal sinus and posterior ethmoidal cells of the left side were freely opened, and a little muco-pus escaped. Visual acuity of the left side improved rapidly, but on the right side the lesion progressed and a central scotoma developed. The

same treatment was then repeated on the right side, and this was followed by still more marked improvement in the right vision than in the case of the left side. According to the author a central scotoma is one of the early symptoms of optic neuritis by infection from the nasal sinuses, and is preceded by an enlargement of the blind spot for colours as was actually observed in this case on the right side.

DR. R. C. ROSENBERGER publishes in the *New York Medical Journal* some interesting research work on the Presence of the Tubercle Bacilli in the blood, by which he claims to have found the bacilli present in the blood in over 300 cases of tubercular disease of all kinds, including not only pulmonary tuberculosis, but also tubercular disease of the glands, bones and peritoneum, and in cases of tuberculous meningitis. It is recognised that in miliary tuberculosis the bacilli have found their way into the blood-stream, but according to this author all forms of the disease are of the nature of a "bacillæmia," and he goes so far as to suggest that the bacilli are probably present in the blood in a large number of apparently healthy individuals, that they remain there indefinitely in an attenuated condition, and become virulent at any time when the general resisting powers of the organism are diminished or any particular tissue or organ becomes injured, or otherwise affected. In this way he would explain the frequent occurrence of tubercular disease following all kinds of traumatism. He thinks also the bacilli may be transmitted from the maternal organism to the infant by means of the placenta. The details of his technique are as follows: 5 c.c. of blood is drawn from one of the veins of the arm under aseptic precautions, and is mixed with an equal amount of 2-per-cent. solution of potassium citrate in normal saline. The mixture is placed in a refrigerator for 24 hours, when a sediment is formed. This is spread on slides and dried with a moderate heat and then placed in sterilised distilled water, and fixed in the usual way over a Bunsen flame and stained.

INTRAVENOUS Chloroformisation is among the latest novelties in methods of anæsthesia. Arguing that the lungs are only intermediary agents and that the chloroform must be carried by the blood to the nerve centres in order to exercise its effect, Dr. Burkhardt of Wurtzburg suggests that by introducing it directly into the circulation by intravenous injection, it might be possible to avoid accidents contingent to the pulmonary inhalation, reduce the dose, and adjust it more accurately. He has, therefore, carried out a number of experiments on cats, rabbits, and dogs, and has since also employed the method in four operations on the human subject with satisfactory results. An account of his work appears in the *Münchener Medizinische Wochenschrift*. He introduces the

chloroform in normal saline solution, 100 c.c., containing 0.63 c.c. of chloroform. In animals he injected it into the jugular vein, and regulated the flow of the solution according to the corneal reflex. In this way he was able to keep the animals anæsthetised for a considerable period with a minimum amount of chloroform. He found that the concentration of chloroform in the blood sufficient to obtain narcosis amounted to 0.0415 per cent., which corresponds closely to the figures of Pohl for chloroform inhalation, namely, 0.015 to 0.043. The urine of some of the animals after the experiments showed the presence of albumen, and also cylindrical cells and hæmoglobin. The four patients were aged 79, 40, 14, and 13, and the operations were removal of an epithelioma of the hand, excision of tubercular glands of the neck, a plastic operation of the axilla, and a curetting of a tuberculous trochanter. The solution was injected into the median vein, complete anæsthesia was easily maintained, and there was only slight vomiting afterwards. In two cases there was albuminuria immediately afterwards, and in one case hæmoglobinuria, but these quickly disappeared. It is too early at present to say what advantages, if any, this method may offer over the more usual forms of anæsthesia.

IT appears that both in America and in Saxony there have been cases of poisoning from the use of certain Hair Dyes, amongst which "Mrs. Potter's Walnut-Juice Hair Stain" has been mentioned in America. The toxic principle appears to be paraphenylene-diamine. According to a report issued by the North Dakota Agricultural Experimental Station, the proprietary article in question consists of two bottles: No. 1 contained 1.86 per cent. of absolute hydrogen peroxide; No. 2 was found to contain a substance conforming to the tests for paraphenylene-diamine in a solution containing 54.45 per cent. of absolute alcohol by volume. In one of the cases the symptoms consisted at first of an eruption similar to that of dermatitis venenata over the face, neck, and shoulders, running its course in about ten days. Then ensued a sub-acute attack of eczema involving the scalp, face, neck, trunk, and arms, persisting for six weeks and resisting treatment in a very stubborn way. In addition to the dermatitis there may be an extreme degree of itching, headache, and even swelling of the limbs and bloating of the face.

THE treatment of Trigeminal Neuralgia by Schüssler's method apparently produces many good results. The essence of the technique is to inject a solution of alcohol into the affected branch of the nerve by means of a hypodermic needle and syringe. There is apt to be a little local pain for the time being; this is followed by anæsthesia which may last for a considerable time. If the pain should return owing to the regeneration of the nerve fibres, the procedure may be repeated. One formula for the fluid to be injected is as follows: Cocaine hydrochloride, 2 grains; chloroform, 10 mms.; absolute alcohol, 3 drachms; distilled water, $\frac{1}{2}$ oz. Of this

solution, 2 cubic centimetres are injected at a time. If a single injection relieves pain, well and good; if not, then the injection may be repeated after a couple of days; and if not by then, it may be given yet a third time at a corresponding interval.

A RECENT monograph by Lévy-Francckel discusses Chronic Aortitis and Aortic Atheroma in Children, with particular reference to those forms resulting from congenital syphilis. Clinical and pathological analysis of some 30 cases of aortic disease in children suggests that all the degrees of disease which occur in the adult can be recognised in the child, and that, moreover, it is easier to study the early stages of atheroma in the latter. The lesions appear to start in the middle coat of the vessel and to extend thence to the inner. Among the diseases which cause this degenerative process congenital syphilis easily stands first, though articular rheumatism, chorea, tuberculosis, scarlet fever, chronic nephritis, and myxœdema are responsible for a number of cases. Clinically he distinguishes four forms of aortic atheroma—(1) a variety in which the disease is latent; (2) pure aortic atheroma; (3) a form occurring with generalised arterio-sclerosis in other vessels; and (4) that associated with valvular lesions. In all cases diagnosis rests on the increased aortic dulness, the existence of a purring systolic thrill, and especially the presence of a rough systolic souffle heard at the base. Prognosis is bad, for the child is always exposed to the development of aortic aneurysm and to the danger of rupture of the aorta. These facts emphasise the necessity of applying vigorous antisyphilitic treatment from birth to all congenitally syphilitic children.

IT is a matter of common knowledge that a certain proportion of new-born infants suffer from Noisy Respiration, most marked during the inspiratory act, and such cases are often classified as congenital laryngeal stridor. An article in the *Journal de Médecine Interne* from the pen of Terrien, discusses this affection at some length, and the author holds that it is not proper to regard the affection as arising from any single cause. Stridor, according to him, is a symptom which results from a number of pathological states, and he distinguishes the following types of stridorous respiration: (1) Congenital vestibular wheezing due to laryngeal deformity, in which the epiglottis is rolled in so that its lateral borders approach each other and the aryteno-epiglottidean folds are stuck together at their anterior thirds to form a kind of supplementary glottis, the vibrations of which give rise to the wheezing. (2) Stridor by spasm of the glottis. Too much weight must not, however, be given to the laryngeal examination, for at the moment of examination the child may contract its glottis and so produce a spasm which is, however, purely transitory. (3) Snoring due to adenoids, in which the bulky vegetations produce a laryngeal wheezing of a particular timbre which is exaggerated during sleep, and will often disappear, when the nasal fossæ are pinched together; this type of stridor

is particularly intense, and the noise resembles grunting. (4) Tracheo-bronchial wheezing, rare in the infant, and distinguished by its tone, its persistence during expiration, and by the spasmodic cough which often accompanies it. (5) Stridor due to hypertrophy of the thymus. Here the wheezing is perceptible both during inspiration and expiration, and varies in intensity according to the position in which the head is held, being increased by extension and diminished by flexion. Radioscopic examination and careful percussion will moreover show that the thymus is enlarged.

IN a recently published monograph, Dr. Murit, of Paris, points out that in the case of a pregnant woman attacked by a grave Pneumonia between the seventh and ninth month of gestation there is a likelihood of the disease spreading to the foetus whether this latter be born prematurely or at term. The pneumococcus passes directly into the foetal circulation through the placenta, and causes either generalised pneumococcal infections, such as septicæmia and pyæmia with multiple foci, or a localised pulmonary inflammation—i.e. a congenital pneumonia. In a few rare cases the child is born dead, but it usually lives a few hours or even a few days. The child breathes with difficulty, but auscultation reveals nothing abnormal. Signs of a grave infection are, however, present, such as prostration and a subicteric tinge of the integuments. In a short time the child becomes cold and shivers, the symptoms increase in severity, and death ensues with convulsions. Congenital pneumonia is not a common disease, since its occurrence necessitates the presence of a pneumococcal septicæmia in the mother, and the pneumococcus does not pass often into the circulation. Despite this relative rarity, the possibility of such an infection occurring must not be lost sight of in dealing with grave pneumonia in a pregnant woman, for the maternal prognosis is naturally rendered more serious by such an occurrence.

IN the current issue of the *Journal of Tropical Medicine and Hygiene* appears a short paper by Dr. Nutford Atkinson, of Hong Kong, entitled "A Possible Natural Enemy to the Mosquito." The author describes a species of flower-fly, named *Lispa sinensis*, which, according to his observations, especially occupies itself in preying voraciously upon the larvæ of the mosquito tribe. The article is accompanied by illustrations of the fly's appearance and a short expert description by Mr. G. G. Austen, of the British Museum. Dr. Atkinson records certain observations made last summer in Hong Kong with reference to the devouring of larvæ by flies in the nullah and streams and stagnant waters of that colony. The flies which seemed then to be most active in the work of mosquito destruction were shortly afterwards recognised as being members of the *Dolichopodides*; but their full recognition has been deferred until the present summer. The flies brought home to England by Dr. Atkinson were all of the same species, and had been seen by him to possess a marked pre-

dilection for mosquito larvæ, which they devoured with extraordinary voracity and persistence. The author's preliminary report will, no doubt, be supplemented after his return to Hong Kong by further evidence in fuller detail as to the nature of the larvæ preyed upon by these aquatic flower-flies.

THE cautious application of strong Pyrogallol vaseline ointment has been successful in a number of cases of Lupus Vulgaris. The treatment is commenced with a 10 per cent. ointment applied for several days. When vesicles form the strength of the ointment is reduced to 2 per cent. until grey granulations no longer appear. Then weaker applications are used, until a strength of only 0.1 per cent. is reached. If no improvement is evident with the 2 per cent. ointments a fresh application of 10 per cent. must be made for a day or two. The strong ointment should never be applied to the external ear, and for the nose one of 4 per cent. will generally be safer. The pain caused is not intolerable; morphine need only be employed with the 10 per cent. ointment, or when passing from a weaker to a stronger application. The ointment should be spread on the dressing with a wooden or vulcanite spatula. If a steel spatula is used the skin acquires an indelible grey or black stain. When dressing the lesions, the fresh dressing should be spread ready for use and applied immediately the old one is removed, since exposure of the treated surface to the air causes intense pain. Thirteen cases have been cured by this treatment.

SOME recent work carried out by Déjean in France upon the relative strength of Colchicum preparations shows how much better in some respects it is to use the fresh than the dried corms. The fresh flowers are also very much preferred to the dried flowers whenever they are obtainable. The strong mother tincture made with fresh flowers, 1:1, of the 1884 Codex, is relatively much stronger than the tincture made with dried flowers—the therapeutic equivalent being 1:12.8. Again the strong mother tincture of fresh flowers contains 0.768 parts of colchicine per 1,000, whereas that of the fresh corms contains 0.690 parts per 1,000. The relative pharmacological strengths of dried and fresh corms are as 1:19. This is evidently due to the fact that the alkaloids are deteriorated by the drying of the corm, so that in many galenical preparations it is clearly advisable to use the fresh drug.

IT is not generally known how valuable a preventive against the bites of mosquitoes, fleas, gnats, midges, and so forth, Oil of Sassafras is. The fact has recently been recorded again by Mr. A. T. Girdler. If in a susceptible person the oil is applied at once to the place that has been bitten it almost invariably prevents the poisoning altogether. If applied to the inflamed spot a day or two after the bite it at once stops the irritation. To those who live in the country, and whose life is made a burden by undue susceptibility to insect bites, and to those who have not yet returned from holiday-making in regions infested by biting insects, Oil of Sassafras should be a great boon, and it is harmless as an external application.

HOSPITAL CLINICS.

THE DIAGNOSIS OF SWELLINGS IN THE PELVIS.

By ARTHUR GILES, M.D., B.Sc., F.R.C.S.; Surgeon to the Chelsea Hospital for Children, Gynæcologist to the Prince of Wales's Hospital, Tottenham.

(A Clinical Lecture delivered at the Prince of Wales's Hospital, Tottenham.)

GENTLEMEN,—I have found it necessary to change the subject of my lecture. I had hoped to give you some of the results of removing the appendages, results collated from cases after operation, but the material was so extensive that I have not had time to work it up. So I propose to talk on a rather more practical subject, that of the diagnosis of swelling in the pelvis. One is apt to encounter such swellings at any time, often without warning, and I think we should run through the possibilities on some general scheme or plan; then the diagnosis will be a good deal easier. I shall go on the principle which I have already adopted in my little book on Gynæcological Diagnosis, namely, arguing from the known to the unknown. I shall not say, in talking of pelvic tumours, that the symptoms of fibroid, or ovarian tumour, are so and so. We are face to face with a tumour in the pelvis, and we want to know what it is.

Perhaps the most convenient way of beginning our classification will be to divide the cases into those that are definitely uterine, cases which are definitely not uterine, cases in which the condition is doubtful, and cases in which more than one tumour are present.

DEFINITELY UTERINE CASES.

The first great group are the definitely uterine tumours. You may be able to discover this in various ways. You may be able to feel the appendages independently of the uterus and realise that they are healthy. Or you may make certain there is nothing in the pelvis corresponding to the uterus except the tumour, that is, that the whole thing moves *en bloc*.

The next thing to take as the clue is the condition of the patient's menstruation. If there is amenorrhœa this may be primary, that is to say, the patient has never menstruated at all, and yet there is this swelling in the pelvis. Of course, there are cases of atresia of the vagina, where you cannot get in, and it is only *per rectum* that you can find there is any swelling in the pelvis. If there is primary amenorrhœa and a swelling in the pelvis, with a patulous vagina, it is probable that the external os has no way through it; and the associated symptom which the patient will complain of will be, perhaps, some pain at more or less regularly recurring monthly intervals. So with

these data before you, you can make a diagnosis of hæmatometra.

But the case may be one in which the patient has been menstruating regularly, but has ceased to do so for two or three months. When you get amenorrhœa following on normal menstruation, then in 99 per cent. of the cases you have to deal with pregnancy. When you investigate further you perhaps find the cervix soft and the vagina of a violet colour. To the feel, hæmatometra and pregnancy are very much alike, if the uterus is in the normal position. With the symptoms of pregnancy there may be associated symptoms of bladder trouble, first frequency of micturition, and then retention of urine. From these you can easily make your diagnosis of retroversion of the gravid uterus. The amenorrhœa, however, may not be absolute, but may be followed by irregular hæmorrhage or floodings. The uterus may not be as soft and elastic as in a normal pregnancy, but is rather harder and doughy. Then you will probably find that the cervical canal, instead of being normally closed, is partly patulous and dilated. And there are symptoms of pregnancy, in addition to which the patient probably has some pains in the abdomen of a bearing-down character, which she will tell you are like labour pains. You can then say it is pregnancy. But you can also say that abortion is either imminent or probable.

Then there is the second group, in which, instead of amenorrhœa, there is metrorrhagia, or menorrhagia, without any previous period of amenorrhœa. You are then practically certain to find the uterus large and hard; it may be smooth and uniformly enlarged, or it may be irregularly enlarged. There may be no symptoms except the fact of the hæmorrhage, although there may also be a history of pain, and perhaps of some bladder disturbance. On these data you are justified in diagnosing fibroid, including in that term pure fibroma, fibro-myoma, and fibro-adenoma. This applies equally to polypus inside the uterus. If it were a mucous polypus, no particular enlargement of the uterus would be noticeable.

PYOMETRA WITH CERVICAL CANCER.

There is another form of enlargement of the uterus which is worth mentioning, where we should probably find neither amenorrhœa nor menorrhagia, but some irregular hæmorrhage, scanty in amount. An

examination may show an enlargement of the uterus, associated with carcinoma of the cervix, with sometimes a rise of temperature and more pain than is usual with carcinoma of the cervix. When in such a case you have said carcinoma of the cervix, your diagnosis is not complete; it is almost certainly something more, namely, pyometra. That is comparatively rare, except in association with carcinoma of the cervix. The reason is that the growth in the cervix obliterates the cervical canal, and being more or less a septic growth it is liable to lead to an accumulation of pus inside the uterus.

Carcinoma of the cervix by itself never causes marked enlargement of the uterus such as would justify its inclusion under the heading of pelvic tumours. Of course, it may also have been pregnancy, but we are not considering that just now. A point of some interest is, that you will hardly ever find carcinoma of the uterus associated with early pregnancy, the reason being that conception is almost impossible when there is carcinoma of the cervix present. When you find the two conditions present, nearly always the pregnancy has taken place before the carcinoma has made much advance.

THE GROUP OF NON-UTERINE TUMOURS.

The next group is where we are certain that the tumour is not uterine. Here again it is useful to begin by inquiring into menstruation. If there is amenorrhœa associated with a tumour which is distinct from the uterus—unless at the menopause—it is practically certain to be extra-uterine pregnancy. The tumour may be mobile, or it may be fixed. Suppose it is mobile. With these facts you will almost certainly find the amenorrhœa is of short duration, not more than two or three months, and the tumour which is present will be an unruptured tubal pregnancy. One might include ovarian pregnancy, but that is so rare that we need not mention it specifically.

Of course, these cases are not often diagnosed. I have not seen more than two or three cases that I have diagnosed as unruptured extra-uterine pregnancy, and probably it has not fallen to your lot to do it very often either. The reason is that when extra-uterine pregnancy is unruptured, as a rule there are no symptoms at all. The patient thinks it is an ordinary pregnancy, and therefore there is nothing to call attention to the pelvis. And if a woman comes to you and asks you to attend her in seven months' time, you do not think it necessary then to examine her. Of course, I do not say it would be a bad thing if examination were made at that early period; no doubt it would be sometimes inconvenient, but it would save many difficulties afterwards.

FIXATION AND MOBILITY.

But suppose the tumour is fixed and there is amenorrhœa, you will almost always find that there has been a little trickling hæmorrhage; an irregular, scanty, blood-stained discharge. And the diagnosis you must make then is ruptured tubal pregnancy. A mobile tumour under these conditions is generally on one side of the uterus; occasionally it may be in front, or behind. A fixed tumour is most often on one side, but it may be behind. If on one side, it is almost certainly in the broad ligament itself. If it is behind, it generally means that there has been a rupture into the general peritoneal cavity, that blood has accumulated in the pouch of Douglas, and has formed a pelvic hæmatocele.

The fact that a tumour of this sort is definitely fixed, is rather useful from the point of view of diagnosis. I may tell you of a case which happened to me ten or twelve years ago, when, of course, I had had less experience. I saw a patient who was complaining of pain on one side, and of a little irregular hæmorrhage. On examining, I thought I found a tumour to the left of the uterus, and on those data I said I thought it was extra-uterine pregnancy. I noticed I could push up this tumour, but in spite of that I still thought it was extra-uterine pregnancy, but I did not feel quite sure enough to advise operation, so I said we would wait. I saw her a fortnight later, and by this time the tumour at the side had shifted, and was definitely the fundus of the uterus. She was still having a little hæmorrhage, and we concluded she was in for a miscarriage, and she verified the diagnosis a few weeks later. My error arose from not taking sufficient notice of the fact that if it was ruptured it must be fixed. If it is a mobile extra-uterine pregnancy which is unruptured, there will be no hæmorrhage, and if it is ruptured with hæmorrhage, it will be fixed.

LATERAL TUMOURS WITH UNALTERED MENSTRUATION.

We come now to a larger group, in which the menstruation is unaltered, and there is a tumour at the side of the uterus. We can determine at once whether it is mobile or fixed. With a mobile tumour by the side of the uterus with menstruation unaltered you can at once exclude pregnancy, and therefore it must be some form of new growth. It could not be inflammatory, or it would not be mobile. So you can at once say it is new growth of some sort. According to its position you will be able to get a little further.

With a mobile tumour by the side of the uterus, rather cystic and rounded, you will be pretty safe in diagnosing a small ovarian. If in a similar position the tumour be very hard, and closely connected with the uterus, you can diagnose pedunculated fibroid. I say small ovarian, because a large ovarian would never be by the side of the uterus. When it is bigger, it either gets jammed behind the

uterus and causes symptoms of impaction, or, what is more usual, it gets in front of the uterus, and presses the uterus back into the hollow of the sacrum, and as the ovarian gets larger still, it rises up in the abdomen, releases the uterus, and lies above it. Later, when the tumour is too large to sink into the pelvis and is abdominal, the position of the uterus may be normal.

But there are a few other things which are worth bearing in mind. There might, for instance, be a mobile swelling to the left of the uterus, not rounded and cystic, nor even hard, but rather irregular, and of medium consistency, perhaps doughy. Such a tumour may be a growth of the sigmoid. It is too high up to be reached by the rectum. And besides, if it were of the rectum it would be fixed; but where the meso-sigmoid allows of movement you may get a growth there which rather closely resembles some of these things. That growth is practically certainly carcinoma. It would have to be on the left side. There might be on the right side a growth of the cæcum, but that is much less likely, for the reason that it is very rare for the cæcum to occupy a position in the pelvis. The sigmoid comes into the pelvis below the brim, but the cæcum hardly ever does.

One should mention the fact that sometimes one can feel a mobile swelling by the side of or behind the uterus, or in front, softer than any we have mentioned so far, and definitely elongated. With such a tumour I recommend you to be guarded in your diagnosis, and say you would like to see the patient in a week's time, and give her purgatives, because in thin people it is possible to feel distended coils of intestine. There may be a swelling in front of the uterus, which moves easily, as if it were in fluid; that is certain to be a foreign body in the bladder.

FIXED SEPARATE TUMOURS.

Now let us take the second division, in which the tumour is fixed, still with menstruation unaltered, and a separate tumour. These fixed tumours I think we should take according to their position. Take first the lateral ones. What are the swellings which we may find fixed by the side of the uterus with unaltered menstruation? The tumour may be globular and cystic, and give all the feeling of an ovarian cyst. If a cyst be fixed it must be for some reason, either because inflammation around it has caused it to adhere, or because it is impacted, or because of its developing in the broad ligament, which also prevents it rising. The cyst in the broad ligament would give the fewest symptoms; indeed, it might develop without causing any symptoms beyond a little fulness or a slight aching in the pelvis. But if there is inflamed ovarian, there will be definite pain and tenderness, and with impacted ovarian cyst there would be symptoms of pressure.

Instead of being spherical or globular, this lateral cystic swelling may be ovoid or irregular. Probably it is not a true cyst, for a true cyst always tends to be spherical: it is fluid in the tubes, and so you have to do with hydrosalpinx. That may develop without any special pain, and without any particular symptoms. But there may be this same sort of feeling and swelling in a rather irregular body, associated

with very marked pain, and perhaps with rise of temperature. Then you would be justified in supposing that the contents of that tube were not clear fluid, but pus, and so you would make the diagnosis of pyosalpinx.

The tumour may not be cystic at all, but may be hard. If it is a hard rounded tumour, what is most likely is that it is a fibroid of the uterus developing in the broad ligament, or fibroid of the broad ligament itself. But most fibroids originate in the uterus. Such a tumour which is hard may not be rounded and may not suggest fibroid. It may be irregular and give the well-known board-like hardness which you sometimes find in connection with pelvic inflammation, and then there will also be rise of temperature, and perhaps even rigors, and so you can say it is pelvic cellulitis. You know the feel; everything about the uterus seems involved in one hard mass. And you may get a pelvic abscess with the formation of pus developing in the broad ligament, where you cannot elicit fluctuation, because there is too much thickening at the base of the broad ligament between you and the pus. But it is a further possibility. You cannot, as a rule, tell which it is until you open up the region.

If there were marked rigors and a very up-and-down temperature suggestive of pus, you would very likely diagnose abscess; and if there were a temperature, not so high, but more sustained, with the patient not looking so ill, you would be more likely to diagnose pelvic cellulitis.

There may be a mass on the left side which is neither cystic nor very hard, but may be doughy where the tumour is carcinoma of the rectum. You may be able to feel the appendages separately. The broad ligament feels soft, and then, of course, you put your finger into the rectum and ascertain if there is a growth there. If there is any doubt, that is a thing which is worth doing; it may save you retracting your opinion afterwards, which may be an awkward matter, if you say it is probably ovarian and can be removed. "When in doubt say nothing"; and that may be interpreted by the patient as wisdom.

You may find a swelling behind the uterus, and those which occur there are virtually the same as those which you find at the side of it. There may be impacted ovarian, inflamed ovarian, impacted fibroid, or a pelvic inflammation, with corresponding symptoms and signs to those we have considered, so we need not go over them again.

FIXED ANTERIOR SWELLINGS.

Then there are fixed swellings in front of the uterus. The most frequent is a hard rounded swelling, which is a fibroid developing from the anterior wall of the cervix, and pushing up the bladder. Its position causes it to be fixed. In front of the uterus there may also be a fixed cystic swelling. That practically cannot be ovarian, because an ovarian in front would have plenty of room in which to move and would not be fixed. And that reduces you to only one other thing, and that is a distended bladder. Some time ago a friend of mine wrote asking me to hold myself in readiness to go down and operate in a case of

supposed rather large ovarian cyst. Two days later, however, he wrote and said that the passing of a catheter had resulted in 80 ozs. of urine coming away and the cyst had disappeared, and all was peace. He did not say what he told the patient after making the first diagnosis.

Thirdly, the swelling in front of the uterus may be a firm sort of swelling, almost hard, and rather irregular. In such a case there may be no symptoms except pain, or there may be some hæmorrhage on micturition. And if you pass a cystoscope you will almost certainly see there is carcinoma of the bladder. Without the cystoscope you may not be able to do more than infer that it is carcinoma of the bladder.

THE HISTORY OF THREE UNUSUAL CASES.

Occasionally you meet with things which are absolutely out of the ordinary course of experience, and I will tell you the history of three cases somewhat on these lines. The first was a patient who was brought in here about sixteen months ago, with a history of having passed fæcal matter from the bladder. We cystoscoped her, and found merely a red, ulcerated-looking patch on the posterior wall of the bladder. We could feel there was a swelling to the left of the uterus, and I diagnosed an abscess in the pelvis communicating on the one hand with the bladder, and on the other hand with the bowel. We opened the abdomen, and found this swelling on the left of the uterus, which turned out to be a small suppurating ovarian cyst, full of pus, but independent of the other conditions. The sigmoid was adherent to the bladder direct, the uterus being turned down and pushed out of the way. On separating the sigmoid from the bladder there was a hole in each. It was in a woman æt. 28, and as I thought it was tuberculous I resected 4 in. of the bowel. Subsequent report showed it to be carcinoma of the sigmoid, adherent to and ulcerating into the bladder. She is all right, although it is sixteen months since the operation.

The second case was that of a patient who had been passing fæcal matter in considerable quantities by the bladder. Again it was carcinoma of the sigmoid, but associated with extensive carcinoma of the bladder, so that any question of removal had to be put on one side. I should think such a combination is very rare; yet three weeks after seeing that case I saw another almost precisely similar in regard to the history, and on opening up I found carcinoma of the bowel and bladder, and in that case it had affected the bladder in a curious way. The growth had spread round the base and lower part of the sides of the bladder, so that it made a complete hard cup, and as the bladder was empty at the time of the operation the fundus of the bladder dropped into this hard cup, and produced that curious appearance.

For the sake of symmetry we may put a third group, that with menstruation increased, say menorrhagia; but that would have comparatively little diagnostic value.

There are three conditions of tumour in this region apart from the uterus that may cause

menorrhagia. The first is fibroids, and that presupposes that in addition to the tumour which you feel separate from the uterus, there must be a small one in the uterus causing menorrhagia. The second is carcinoma of the ovary. Ordinary ovarian tumour does not cause menorrhagia, but a carcinoma of the ovary may. Thirdly, there may be pus tubes, and without any alteration of menstruation, but it is not infrequent with pus tubes to find menstruation is increased.

DOUBTFUL UTERINE CASES.

I said there was a third group in which one could not say for certain whether the tumour was uterine or not. There we have a comparatively easy way of settling the matter. If we find that menstruation has gone on unaltered we can at once exclude pregnancy, consequently we can pass a sound and see whether it goes into the tumour or not, and settle whether it is a uterine or a non-uterine tumour. If we find there is amenorrhœa we have only to decide whether it is a case of extra-uterine pregnancy or intra-uterine.

If the uterus and tumour are in a normal position we may at once feel certain it is not extra-uterine pregnancy. If the tumour is by the side of or behind the uterus we shall soon conclude whether it is uterine or not; because we should only have to decide whether we had to do with retroversion of the gravid uterus, or an extra-uterine pregnancy. Time will decide that.

Retroversion of the gravid uterus will probably not be associated with hæmorrhage at all, unless the case is one of threatened abortion, whereas a tumour situated behind the uterus simulating retroversion of the gravid uterus would be a ruptured uterine, and there would almost certainly be hæmorrhage.

MULTIPLE TUMOURS.

And we have left the cases in which there is more than one tumour. In those it is not a question of diagnosis but of guessing. I shall not detain you with details now. You can practically settle for yourselves the permutations and combinations: there may be pregnancy with fibroid, with ovarian, with pus tubes, with extra-uterine pregnancy; there may be fibroids with the same combinations; there may be multiple fibroids and multiple ovarians, or there may be a double uterus.

And in addition to all these possible conditions you may have a growth in connection with the sigmoid or rectum as well, and those are things which no man can diagnose with any certainty. If you do make a correct diagnosis, you may consider you are at least as lucky as you are clever. I operated in one case where I thought I should find multiple fibroids. There were fibroids in the uterus, but the main mass was a large suppurating ovarian cyst on the right side, in the walls of which there were carcinomatous deposits with other deposits on the back of the uterus. Nothing short of inspiration would enable one to diagnose a condition of that kind. Such a case has always to be investigated by opening the abdomen.

MEDICINE.

ANTI-TYPHOID VACCINATION.

THE question of the value of vaccine inoculations against typhoid fever and the analogous question of the treatment of patients suffering from typhoid fever with vaccine have been worked at by the officials of the Royal Army Medical Corps more fully, probably, than by any other body of men. Each year brings advances in the technique, one of the numerous papers on the subject being that by Major H. W. Grattan and Captain A. L. Webb, read before the United Services Medical Society and printed *in extenso* in the *Journal of the Royal Army Medical Corps*. Although medical practitioners do not actually need a detailed acquaintance with bacteriological methods, nevertheless it enables them to follow the *rationale* of vaccine treatment when they have a clear idea of the process by which a vaccine is prepared. The following is a summary of the various steps of the technique required in making an anti-typhoid vaccine, which consists of a sterilised broth culture of the typhoid bacillus. The broth is ordinary nutrient broth brought to a reaction of +10 (Eyre's scale)—that is to say, it is made alkaline to a certain definite degree. It is sterilised in the autoclave for a minimum period of three-quarters of an hour at 120° C. After cooling over night, it is incubated for 48 hours at 37° C., and then kept for two or three days at room temperature in the dark to prove its sterility. The broth is not sterilised in bulk, but in flasks containing not more than 300 c.c.

The purity of the culture is verified by plating, by titration with an anti-typhoid serum, by direct microscopical examination, and by cultural tests. The flasks are then inoculated and incubated for 48 hours at 37° C., and are placed in a horizontal position in the incubator. A dense growth of typhoid bacilli is obtained with the flasks in this position, owing to the fact that the typhoid bacillus grows more readily in the presence of an abundant supply of oxygen. All the apparatus, with the exception of the bottles, is sterilised in the autoclave for three-quarters of an hour at 120° C. The bottles are sterilised by dry heat.

The contents of a series of flasks are then mixed and measured in a graduated jar; a batch of culture as a rule consists of about 4 litres before it is diluted. Measured volumes of culture are then run off into suitable flasks by means of "two-way tubes." These tubes are then removed, and samples of the growth taken and tested for purity. This precaution is necessary in the preparation of all vaccines, but more especially so when a large quantity is prepared from many flasks. The flasks are closed with their original plugs, which are then covered with waxed paper. This is perforated in order that an even pressure may be maintained, thus ensuring that the temperature of the culture will correspond with the control flask in the bath. The flasks are then placed in a water-bath at a temperature of 45° C. A thermometer placed in the control flask will enable one to ascertain the exact temperature of the culture.

The bath is kept at a temperature of 45° C. for half an hour to allow the temperature of the culture to rise to that of the bath. The temperature of the whole is then gradually raised until the thermometer inside the control flask stands at 53° C. After an hour and ten minutes at 53° C., during which time the flasks are repeatedly shaken, they are taken out of the bath and cooled down. The reason for this cooling is that it has been found by experiment that the potency of the culture is to a large extent destroyed if the antiseptic is added when the culture is hot.

The strength of the culture is then estimated by the "counting method." The technique is as follows: A small pipette is taken and a mark made at a convenient distance from the end; blood is then drawn up to the mark, and this volume of blood is washed out into citrate solution in a small glass capsule. After centrifuging, the supernatant clear fluid is pipetted off, the remaining cells are then twice washed with normal saline, and diluted with a small quantity of this fluid. The culture is then taken up to the same mark in the pipette used for taking the blood, and this is well mixed with the washed cells and saline. Wet film preparations are then made by placing small drops of the preparation on clean slides, dropping cover-glasses on, and ringing them with vaseline.

A series of successive "fields" are passed in view by means of a mechanical stage, and in order to avoid eye-strain the field is narrowed by means of two glass filaments fixed on a disc which is dropped into the eye-piece of the microscope. The number of bacilli and red cells are noted in each field, and not less than 100 fields, or 1,000 red cells, are counted. The calculation is based on the fact that there are 5,000,000,000 red cells in 1 c.c. of blood, and by rule of three we can estimate the number of bacilli in 1 c.c. of culture, because we are comparing an equal quantity of a culture of unknown strength with an equal quantity of blood of a known strength. For example, if the count gave 1,500 red cells and 300 bacilli, then the strength of the vaccine would be 1,000,000,000 per c.c. After the culture has cooled down, samples are again taken to see if the bacilli have been killed by the heating. The preservative, which is 0.25 per cent. pure lysol, is now added in the form of a 10-per-cent. solution in distilled water. Two-way tubes are then fitted to the flasks, and the rubber corks and tops of the flasks sealed with wax.

As it has been thought advisable to have a vaccine of a standard strength, and at the same time have the dose in a convenient form, the strength has been fixed at 1,000,000,000 per c.c.; so in cultures stronger than this, diluting fluid is added in sufficient quantity to reduce it to standard strength. The diluting fluid consists of sterile broth + 0.25 per cent. lysol. The following day the diluted vaccine is tested for sterility. After a minimum period of five days, the tests proving sterile, the vaccine is bottled. The technique of bottling is as follows:

The glass guard and pipette are connected to one limb of the two-way tube by means of rubber and glass connections; by the aid of a hand-blower the operator can maintain a constant pressure in the flask, and a suitable flow of vaccine through the pipette. As each bottle is filled it is sealed.

On a subsequent date certain bottles are tested for sterility; two broth tubes and an agar slope are inoculated from each bottle, and aerobic and anaerobic cultures made. After a minimum period of five days' incubation, the tests proving sterile, the vaccine is passed as fit for issue. It is labelled with its serial number, the date on which its sterility was verified, the dose in minims and c.c., and the date after which it must not be used, i.e. three months from the date of manufacture. It has been found by experiment that the vaccine deteriorates with age. Copies of instructions containing an account of how to deal with the vaccine and what symptoms may be expected after its use are sent with each batch. The dose given is 500,000,000, followed after an interval of ten days by a second dose of 1,000,000,000. The vaccine is given by subcutaneous injection; a convenient spot for the inoculation is the outer surface of the arm on a level with the insertion of the deltoid.

The clinical symptoms which result from antityphoid inoculations are subject to considerable individual variations. They may be divided into constitutional and local.

1. *Constitutional Symptoms.*—Some degree of malaise may be expected in every case. Occasionally only there may be a tendency to faintness and perhaps a definite rigor. These symptoms may be expected between the first and sixth hour. When they are at all severe it is the rule for them to come on before the expiration of the third hour. These preliminary symptoms are followed by a certain amount of fever. The average temperature which is attained is about 101° F.; in exceptional cases the temperature may rise as high as 103° F. The fever generally passes off completely at the end of eighteen to twenty-four hours, but in exceptional

cases it may persist for about another twenty-four hours.

2. *Local Symptoms.*—In every case a certain amount of local tenderness will develop. This will generally begin to make itself felt about five to six hours after the inoculation. Somewhat later a red blush will appear around the site of inoculation. The local tenderness will be at its worst in about eighteen hours. In many cases the skin will then be red over an area of four to five inches square, and lines of injected lymphatics will sometimes be traceable radiating from the site of inoculation. There may, in addition, be slight tenderness in the armpit.

The most recent statistics published on the subject are to be found in the February number of the *Journal of the Royal Army Medical Corps*, in a paper by Brevet Lieut.-Col. W. B. Leishman.

The total strength of the sixteen units under observation was 12,083. Of these 5,473 were inoculated, amongst whom twenty-one cases of enteric occurred with two deaths. The remaining 6,610 non-inoculated men served as a control; amongst these occurred no fewer than 187 cases of enteric with twenty-six deaths.

The case incidence per 1,000 amongst the "exposed" units, i.e. in which cases of enteric had occurred, was 6.6 amongst the inoculated and 39.5 amongst the non-inoculated.

Still more striking results are shown by omitting the Royal Fusiliers (the unit inoculated with the old vaccine), the case incidence per 1,000 being 3.7 amongst the inoculated and 32.8 amongst the non-inoculated. The old vaccine was heated to 62° C., which was found to have a deleterious effect on its immunising properties.

The comparison of these results with former statistics on the protective effect of the old vaccine seems to confirm amply the experimental findings, that an over-heated vaccine, a vaccine to which an antiseptic has been added when hot, or a vaccine which has been kept for more than three months, is very much reduced in efficacy.

ARTHRITIS TREATED BY IODINE-LITHIUM IONISATION.

An interesting case of the relief of traumatic arthritis by iodine-lithium ionisation was recently recorded by Dr. Finzi before the Royal Society of Medicine. The patient, a policeman, aged 29, was kicked on the left knee on May 8, 1907. An attack of synovitis followed, which subsided, but as soon as the patient started to work again, in August 1907, another attack occurred. He was admitted to the Metropolitan Hospital, and by means of massage and hot-air baths was sufficiently improved to resume work in October 1907. The knee then gradually became worse, and from time to time was the seat of great pain. In July 1908 the patient was forced to give up work again, and from July 20 to August 5 he was treated with the high-frequency current with slight improvement. At this time the tissues around the knee were very much thickened, the synovial membrane being felt to be very thick; there was considerable grating in the joint, and the

patient was unable to walk without the help of a stick. Skiagrams showed very little bony change in the knee, but definite osteo-arthritic changes in the hands. From August 7 to September 21 the patient was treated with iodine-lithium ionisation. A thick pad of cotton-wool soaked in lithium citrate, covered with a metallic electrode and attached to the positive pole of a galvanic current, was placed on one side of the knee, and a similar pad soaked in potassium iodide, connected to the negative pole, on the other side. These were firmly bandaged on, and the current was increased gradually to about 70 ma., and allowed to pass for 45 minutes. This soon relieved the pain and other symptoms. Before the treatment was stopped the patient walked 30 miles, and has subsequently come in second in a running race. By September 21, 1908, there was great diminution in the thickening around the knee, and the joint now appeared to be normal.

SURGERY.

ACUTE SUPPURATIVE ARTHRITIS IN THE KNEE-JOINT.

A GENUINE suppurative arthritis of the knee-joint is one of the most serious conditions that a surgeon can be called upon to deal with; for not only is the subsequent utility of the joint likely to be very seriously impaired or even completely destroyed; but if active surgical interference is not immediately undertaken the life of the patient may be endangered.

Most of the cases are the result of infection from without, caused either by imperfect technique during an operation in which the interior of the joint is exposed (as, for instance, wiring a fractured patella, or the removal of a displaced or loose semilunar cartilage), or by a perforating wound of the joint by a septic instrument. This is due to the fact that the synovial membranes of joints have much less power of resistance than other serous membranes like the peritoneum, which can, and often does, deal with an infection of its own accord. Evidence of this is supplied by those cases of appendicitis which, although moderately acute, often subside spontaneously if nothing is done. Here the peritoneum reacts to the infection, becomes definitely inflamed, and by its own bactericidal power overcomes the infecting agent and removes the toxins, if any have already been formed. This does not occur in the case of synovial membranes. Here the infecting agent runs riot, and, if it be a chemiotactic organism pus formation occurs and the interior of the joint becomes rapidly disorganised.

For this reason very special care must be taken in preparing the limb, before any operation in which the interior of the joint is to be exposed; and it is well to start three clear days beforehand by shaving the limb and washing it thoroughly with soap and water followed by ether. After this a compress of carbolic acid or biniodide of mercury should be applied and this should be renewed daily up to the time of the operation.

Acute suppurative arthritis of the knee-joint may, however, occur without the introduction of micro-organisms from without. In this case the infection is brought by the blood-stream (hæmic) and the process must be regarded as an auto-infective one. Streptococci and staphylococci may make their way into the knee-joint in this way. So also may the pneumococcus; and that without the patient having exhibited any of the ordinary signs of pneumonia. It must be remembered that, although ordinarily speaking a patient infected with the pneumococcus will most often exhibit the disease in its pulmonary form, other organs may be the only ones affected—thus pneumococcal meningitis, peritonitis, arthritis, and even cystitis may occur without any disease of the lungs. Clinically these conditions may be extremely misleading unless this fact is borne in mind. The gonococcus is also capable of producing a suppurative arthritis, but this hardly ever runs so acute a course as the other varieties mentioned.

The first symptom noticed by the patient is pain

in the knee, which prevents him first from putting any weight upon it and then from flexing it at all, so that he is forced to take to his bed. Almost at the same time the joint becomes swollen and the outlines of the reflection of the synovial membrane become visible. The pain rapidly becomes excruciating and the temperature rises to 103° F. or higher. The constitutional symptoms are well marked.

On examining the knee, it will be found to be swollen. In the writer's opinion it is easier to detect the presence of fluid by looking at the joint than by palpating it and trying for "the patellar tap." In a typical case a crescentic swelling is seen above the upper border of the patella and a bulging on either side of the ligamentum patellæ. The "patellar tap" is often misleading, not to mention the fact that palpation of the joint is excessively painful. In fact the pain caused by this condition is so great that even accidental movement of the bed is sufficient to make the patient cry out. The surface of the joint is not necessarily red because the pus is beneath the deep fascia.

The only condition which is at all likely to be mistaken for acute suppuration in the joint is a septic prepatellar bursitis; but examination should soon make the differential diagnosis clear. In this the pus is superficial to, and not in the joint; the skin over the bursa is red, and pain is elicited only on palpation of the bursa or on flexing the limb which renders the bursa tense. No pain is caused by jarring the fully extended limb, and the constitutional symptoms are not nearly so severe.

As soon as the diagnosis of suppuration in the joint has been made, no time must be lost in giving a free exit to it. Some surgeons prefer to make an incision on either side of the ligamentum patellæ, and pass an indiarubber tube from one incision to the other after irrigating the synovial cavity. This is sometimes sufficient and the inflammation subsides, if the infection has not been a very virulent one. But in a very acute case sufficient drainage is not obtained thereby. It is then necessary to make a crescentic incision, convex downwards from one side of the joint to the other, cutting through the ligamentum patellæ. The whole interior of the joint can then be exposed by flexing the limb and the cavity can be adequately washed out. Ankylosis often occurs subsequently so that division of the ligamentum patellæ will have done no harm. It should, however, be the aim of the surgeon to prevent ankylosis if possible. The best method of avoiding it is to move the joint daily under gas after it has been opened. Good results are often obtained in this way, and it is claimed that the movement keeps open the stomata of the lymphatics which open on the synovial surface, and that thus the removal of toxins is facilitated. If a movable joint is obtained an attempt will be made subsequently to reunite the divided ligamentum patellæ.

DISEASES OF CHILDREN.

THE AFTER-EFFECTS OF INFANTILE PALSY.

ABOUT three-quarters of the cases of infantile paralysis occur during the four months from June to September, that is, in the hot months of the year. The time is, therefore, appropriate to draw attention to the sequelæ of the disease and the means whereby its effects can be minimised or prevented. It is in young children we must be especially on the look-out for its occurrence. Ninety per cent. of the cases are under five years of age at the onset and most of them are infants, that is, under two-and-a-half years of age. It is most common at the age of twelve to eighteen months. Frequently it breaks out in epidemics or in several children of the same family.

The most common mode of onset is a febrile attack, with gastro-intestinal symptoms, for some hours or days before the onset of the palsy. Sometimes there is no previous sign of ill-health and the paralysis is the first thing noted, perhaps on waking up in the morning. On account of its mode of onset it is frequently mistaken for simple gastric disturbance or the incidence of a specific fever. This does not bring any credit to a medical practitioner who has not suspected the possibility of making an erroneous diagnosis, more especially if he has ascribed the paralysis of the limb or limbs to the weakness and inertia of illness, and soothed the mother with the idea that the whole trouble is due to teething.

The initial loss of power is greater than the permanent palsy, and improvement sets in a few days after the acute symptoms and the fever have subsided. This is known as the stage of quiescence, fixation, or regression. Distinct wasting begins in two or three weeks and steadily progresses. In partial recovery of the muscles some of the fibres remain paralysed, atrophy, and are replaced by fibrous and adipose tissue. The tone of the muscle is diminished and it becomes stretched by the antagonistic action of its opponents. This is still more marked if the muscle is completely paralysed. Subsequently the opponent muscles are physically shrunk by over-contraction and produce deformity which can easily be overcome in the early stages. If it is neglected, it ends in pathological shrinking, fibrosis, contractures, and permanent deformities. Eventually fascia, ligaments, joints, and bones become involved.

It is to direct attention to the possibility of preventing the worst of these deformities and limiting the incidence of the milder types that this article is written. As a simple illustration we may take paralysis of one lower limb. To a certain extent the deformity depends on extraneous causes. Thus, the weight of the bed-clothes is a serious factor in the production of talipes equinus. It is, therefore, of the utmost importance that the use of a cradle is insisted on. This alone is insufficient. It is necessary to apply a padded tin splint to the foot and leg, so that the foot is kept at a right angle to the leg. This prevents the stretching of the paralysed muscles, a stretching which is such a serious detriment to successful treatment, for stretched muscles

recover badly. It is almost equally important to prevent the stretching of tendons and ligaments. If not, the characteristic "flail-joint" is produced, and the surgeon is reduced to arthrodesis as the only method of obtaining a useful limb, or the patient has to wear a mechanical apparatus for the rest of his life. Although these measures help to prevent deformity, they do not cure or directly benefit the paralysis. For this we must rely on steady persistence in the use of massage, electricity, and exercises. Mechanical splints and apparatus help to prevent deformity and to overcome that already present, but if they are worn continuously the muscles continue to atrophy from disuse, or at any rate do not improve.

Electrical treatment must be continued for six months, using a galvanic current of such a strength as barely to induce contraction; or the galvanic bath if both the lower limbs are affected. Lewis Jones advocates the sinusoidal current from the main in electric baths. A weak faradic current is sometimes employed for those muscles which react to it, but some observers are inclined to think it increases the tendency to atrophy. Electrical treatment may be continued for a year, if there is any improvement. At first it is applied on alternate days, then daily for some months, finally two or three times a week. During all this time and for a total period of two years friction and massage must be systematically carried on, in order to maintain muscular nutrition and prevent deformity. Begin passive and active movements as soon as the palsy is quiescent. No doubt a skilled masseur is an advantage, but, if unavailable, almost as good results can be obtained by training the mother or nurse in the method.

After the lapse of two years from the onset we must rely on the effects of growth and systematic education of the muscles. Here again it is not essential to transfer the patient to the tender mercies, and sometimes expensive ones, of a specialist or a foreign professor of gymnastics. If the doctor will take the trouble to ascertain which muscles are defective, he can soon devise and teach the exercises suitable for the different cases, and the nurse or mother can see that they are carried out. Particular care must be taken in paralysis of the spinal muscles that the proper ones are exercised.

After the lapse of six months, and rarely before, surgical measures may be needed to correct deformity and enable the child to walk better. It is important to get the foot flat on the ground. Tenotomy, with or without shortening of the tendon, is of temporary benefit. Many cases relapse. Better results are obtained by transplantation of tendon or muscle, and by muscle grafting. Everything should be done to encourage the child to make use of the affected limb, for it is quite astonishing what good results can be obtained by preventive measures and the steady persistence in treatment on the lines here recommended.

OTOLOGY.

CLINICAL TESTS OF HEARING—II.

WE now come to those tests designed to enable us to distinguish between defects of the perceptive apparatus and those of the conducting mechanism. The facts upon which these tests depend are very simple. A steadily diminishing sound, such as that produced by a vibrating tuning fork, is heard more loudly, and therefore longer, by aërial than by bone conduction, provided that the conducting mechanism is normal—that is, that the mobility of the drum-membrane and ossicles is unimpaired and that there is no obstruction in the tympanum or external auditory meatus. Any impairment of the conducting mechanism not only diminishes the conduction of sound through the air, but also increases the intensity of its conduction through the bones of the head. This may easily be proved by holding the base of a C³ fork against the mastoid process until it ceases to be heard, when the sound will reappear on firmly stopping the ear with the finger. On the other hand, when deafness is due to disease of the perceptive apparatus, whether the lesion be in the labyrinth, auditory nerve, or cerebral centres, the bone conduction is reduced with the aërial conduction, and the tuning fork is heard longer through the air than over the mastoid process.

Rinne's test is simply the comparison of the air conduction with bone conduction. The base of the tuning fork is applied to the bone behind and slightly above the ear—that is, just over the antrum—until it ceases to be heard, when it is brought opposite the meatus; if the sound now reappears, Rinne's test is said to be *positive* (R +). If it is not re-heard, the test is repeated in the opposite way, the fork being held near the meatus until the sound ceases, and then being applied behind the ear; if the sound is now again perceived, Rinne's test is *negative* (R -). Although a "negative Rinne" points to disease of the conducting apparatus, and a "positive Rinne" to an affection of the perceptive mechanism, the matter is in reality not quite so simple as this. As Rinne is positive in a normal ear, it is obvious that there must be slight degrees of deafness due to lesions of the conducting apparatus in which a positive Rinne is still present. Supposing that the length of time during which the fork is normally heard by the air *after* it has ceased on the mastoid is 45 seconds, as in a C⁰ fork of the writer's, Rinne will only become negative when the decrease of air conduction *plus* the increase of bone conduction together exceed 45 seconds. Again, the relative duration of the sound through the bone to that through the air varies with forks of different pitch when tested on a normal ear, the bone conduction being proportionately longer with low-pitched than with high-pitched forks; for instance, in a set belonging to the writer, the duration of bone conduction compared to air conduction is for the C⁰ fork 1 : 2, for the C² fork 1 : 3, and for the C⁴ fork 1 : 5. Therefore Rinne's test will more readily become negative in the lower part of the scale, and, especially in slight degrees of deafness, the test should be made

with the C⁰ fork. Again, in cases of severe deafness, involvement of the internal ear can only be excluded if Rinne is negative with the C² as well as the C⁰ fork; for when severe deafness is caused entirely by disease of the conducting mechanism, Rinne's test is negative up to or above this point of the scale. In severe unilateral nerve-deafness the fork on the mastoid may be heard by the opposite ear, and Rinne's test be thus incorrectly taken as negative.

Schwabach's test is the comparison between the bone conduction of the patient's ear and that of the examiner. If the latter is not normal, the abnormality must of course be allowed for. The test is made by transferring the fork from the examiner's to the patient's mastoid, or *vice versa*, as soon as the sound has ceased and noting the number of seconds above or below normal over which the patient hears. The test is mentioned here by name for the sake of clearness, as in Continental writings it often appears as "Schwabach + " or "Schwabach - "; but the multiplication of names is to be deprecated, and English authors usually write the result simply as "bone conduction + " or "B.C. + 12". It is wise to make this test both with the C⁰ and C² forks, and it forms a valuable check to Rinne's test. Increase of bone conduction means disease of the conducting apparatus, and is the natural accompaniment of a negative Rinne; but in old-standing cases of middle-ear disease, and especially in otosclerosis, the bone conduction is often diminished a little, but slight diminution (*i.e.* under 10 seconds) need not be taken to imply disease of the perceptive apparatus.

Weber's test is the comparison of the bone conduction of the patient's two ears. The fork is placed on the middle line of the forehead or vertex, and the patient is asked to state on which side the sound is louder. It is obviously only of value where one ear is much deafer than the other. In middle-ear deafness the sound is better heard in the deafer ear, whilst in nerve-deafness it sounds louder in the good ear. It is useful in cases of extreme unilateral deafness where Rinne's and Schwabach's tests are open to error owing to conduction of sound to the good ear.

Gelle's test is more rarely required; its object is to diagnose fixation of the stapes, and it depends on the fact that increased labyrinthine pressure diminishes the perception of sound. A fork is placed against the mastoid and the air in the meatus is compressed by a Siegle's speculum attached to a rubber ball. If during the compression the fork is heard less well, the stapes is obviously movable and Gelle's test is said to be positive; if the sound is unaffected by compression, ankylosis of the stapes is present and Gelle's test is negative. The stapes becomes fixed in late stages of otosclerosis and chronic catarrh, and in such cases Rinne should be negative up to or above C²; but if there be, as often happens, secondary involvement of the internal ear, Rinne may be positive at C² and negative at C⁰; here the Gelle's test will decide the question of stapes ankylosis.

MOTURING NOTES.

PULLEY BLOCKS v. INSPECTION PITS.

It is said that sheep will follow one another even over a precipice. Might not this old adage be applied in a modified form to the human being? Why has the "pit" become such a universal part and parcel of nearly all motor houses? The idea is doubtlessly an adaptation borrowed from the "loco. shed," where there is every justification for its presence. Locomotives are too heavy to be lifted by hand even head high if it can be avoided; but with even heavy weights the engineer will for any prolonged work sling or jack his engine up rather than burrow underground like a rabbit. I must confess that the idea of any alternative to the regulation pit never entered my mind until some months ago, when a correspondent in one of the motor journals made a most valuable and interesting suggestion whereby inspection pits, with their manifold disadvantages, could be dispensed with. These pits are often difficult to construct, as drainage in most cases must be provided for. They are dangerous, as the list of accidents proves, owing to accumulation of vapour. They harbour dirt, dust, and damp, and when not covered over are difficult to negotiate when bringing a car in, especially at night. Lastly, every time a fresh tool is required a more or less acrobatic feat has to be gone through before it can be reached. Few cars scale more than 30 cwt., the doctor's, as a rule, not more than 15 cwt., and the alternative suggested is pulley blocks.

Providing the motor house is one converted out of an old coach house or stable, with brick or stone walls, get a piece of timber, pitch pine or oak for choice, and place across the house, lodging each end on the wall plate. The ends may be sloped off to let it get well over, if necessary, or a brick bracket can be built

as an extra support; failing this a 4½-inch pier could be built from the floor, or a 9-inch by 3-inch deal placed on end and bolted to the wall. If the shed sides are only wood, a 9-inch brick pier would be necessary, or a piece of timber as stated braced to the side.

The size of the cross-piece must depend on the width of span, but any builder would state what was necessary. In the centre of the stretcher put a clip or iron band with a ring suspended therefrom; from this the hook of the pulley blocks would hang; a pair of Weston blocks will suspend a car at any height without special provision. Pass two rope slings under the chassis fore and aft, and raise the car to any height you want. The adjustments, alterations, or repairs can be done in sight, and no lamps, with consequent dangers, are required.

There are few motor houses but what have head-room enough to elevate a car. To prevent the slings closing in too quickly a wooden stretcher can be used. The foregoing is, of course, only intended to apply to private garages and not to trade ones.

The approximate cost of apparatus sufficient to lift cars of at least 30 cwt. would be:

One set of Weston's self-holding pulley blocks					
and chains	...	...	...	...	£2 0 0
Two rope slings	...	...	...	...	1 0 0
Timber or brickwork and cross piece	...	...	...	...	3 0 0
					£6 0 0

With the ropes so placed that the weight is about equal, there is not the least fear of springing the chassis. The author of the arrangement says he generally removes the body first with the aid of the lifting apparatus, and then slings the chassis.

SOME PRACTICAL NOTES.

An extra outer cover should always be included in a motorist's equipment of spare parts, but it should be thoroughly protected against light, heat, oil, and dampness. One or two inner tubes should also be carried, and care should be taken to see that no deterioration takes place before they are put into use. To put an inner tube, uncovered, into a box full of loose tools, oil cans, etc., is only a little better than throwing it away. The tools will chafe and the oil will rot it, so that, if it holds air at all when inflated, it may soon burst under the weight of the car.

SHOULD a car be in regular service it is better to leave the tyres inflated, but if the vehicle is not used for some months it is better, after having placed jacks under the axles, to deflate partially the tyres. If this is done it will add greatly to their life, as they are then bearing only the pressure of the air with which they are inflated, which is very slight, whereas when supporting the weight of the car this is exerting a continual unnecessary strain on the walls of the cover. By adopting this course

it is estimated that the life of the tyres will be increased at least half the time the car stands idle.

If necessity occasions the taking down of an engine carefully watch the parts. If the manufacturer has not marked them for their respective places the motorist himself should do so. Take the case of the valves. Exhaust valves will not always interchange, and if one, at some time or other, has been ground in a little more than the one next to it, it is hardly likely to suit the cylinder. Apart from the fact that the seatings will not agree, there is naturally a slight difference in the length of the stem, which is enough, sometimes, to spoil the compression through the valve not seating properly.

If petrol drips from the carburettor when the car is standing with the engine stopped the needle valve connected with the float should be looked at. If pressing it down stops the dripping the float is too high. If the dripping persists the valve leaks and requires grinding. "VIATOR."

"THE HOSPITAL"

MEDICAL BOOK SUPPLEMENT.—No. XXI.

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MEDICINE.

A SYSTEM OF MEDICINE. Edited by WILLIAM OSLER, assisted by THOMAS McCRAE. (Oxford Medical Publications. Vol. VI. Pp. 800. Price 30s. net.)

THE sixth volume of this system reaches a higher level of general excellence than some of its predecessors, and is on the whole extremely good and interesting. The peculiar interest of it lies partly in the fact that it deals with a number of the more mysterious maladies which plague us, maladies about which one feels that at any moment some new experimental undertaking or original generalisation may give us a key to them.

The first part of the book is devoted to diseases of the urinary system. The subject is comprehensively and sufficiently dealt with, and includes an excellent survey of the anomalies of urinary secretion from the pen of Dr. Garrod, whose name in this connection has justly won respect on this side. Nevertheless one concludes the section with an uncomfortable conviction of the truth of the statement made by the assistant editor in his prefatory chapter. "In the last twenty-five years," he says, "there has been a great mass of work done with reference to the problems presented by urinary secretion, and one must admit that there has been no advance made at all commensurate with the energy expended, or at all comparable with the increase of knowledge concerning other apparently less important organs." Yet the contributors have done their work well, and the reader will find here a good account of the present position of our knowledge in this department.

Part II., dealing with the diseases of the ductless glands, is entirely from the pen of Dr. George Dock. If this gentleman is fortunate in his subject—which as we have hinted has a peculiar attraction of its own—he is none the less to be congratulated upon his method of presenting it. He is a clear and cogent writer, and has obviously spent much painstaking research in the preparation of his material. His articles are excellent examples of compression, effected without the sacrifice of intelligibility; and for this he may be sure that reviewer and student will be equally thankful. We have had occasion, in reviewing preceding volumes of this series, to carp at the diffuseness and verbosity of several contributors. It is but just, therefore, that we should note the relative freedom of this volume from these defects; and particularly the fine example set to his colleagues by Dr. Dock.

The third part is concerned with diseases of "obscure causation." It is somewhat surprising to find under this heading only five diseases, and still more surprising to find Hodgkin's disease, Arthritis deformans, and Osteomalakia cheek by jowl with Astasia abasia and Adiposis dolorosa. We must suppose that some plan underlies this arrangement, but confess our inability to fathom it. The chapter on Lymphadenoma is well enough in its way, but unsatisfying. It is the custom of some writers for large

systems of medicine to be content with accumulating, at a most meritorious expenditure of pains, the opinions and data of previous workers in a given field. But we wish to enter an emphatic protest against assuming that a writer who has done so much has done all that is required of him. It is to be presumed that when a man is invited to contribute an article on a special disease he is so invited because he has the reputation of a specialist in that disease. At all events, by the time a man of ordinary ability has devoted to a subject study enough to produce such an article as this on Hodgkin's disease, obviously the result of laborious compilation, he must have come to some definite, or more or less definite, conclusions of his own as to the nature of the malady. Yet we are not given them. Surely authoritative writers, after a comprehensive study of the data before them, should summarise the evidence for the benefit of their readers, and say, "having weighed all the evidence to which I have had access, I am of opinion that (to take the case in point) Hodgkin's disease is an infective granuloma." Or the reverse, as the case may be. As it is, the reviewer, who lays no claim to be a specialist in Hodgkin's disease, leaves the business thoroughly puzzled as to which of many contradictory views carries the greatest conviction to a man who has made an elaborate study of the subject.

Dr. McCrae has dealt as clearly as the murkiness of the subject permits with the variety of diseases commonly comprised by the name Arthritis Deformans. In the next, the fifth, part are three articles on vaso-motor and trophic disorders from the able pen of Prof. Osler. It is of course idle to repine that we cannot have an Osler to write all the articles, but if writers only learnt to appreciate the added conviction lent to any essay on a medical subject by the inclusion of personal experience and opinion, they would write, as he does, in the first person, and tell us always what they think about the business in hand.

The final section deals with the medical aspects of life assurance. The statements in it are based upon the experience of American offices. As is usual with text-book pronouncements on this subject a degree of thoroughness is insisted upon which, though often urged in this country, is probably never acted upon even by those who urge it. The truth is that there is so large an element of business and competition in life assurance that what might be best from the purely medical point of view has often to give way to considerations of simplicity and freedom from vexatious delays. Whatever medical examiners may say, their prime function is to obviate a selection against the office they serve. They are there to exclude the man who, feeling that ill-health is creeping upon him, is in haste to insure himself. Given safety from this danger, all that an office has to do is to increase its business to such an extent as to allow fair play to the law of averages upon which its premiums are based.

SURGERY.

A SYSTEM OF OPERATIVE SURGERY. By various authors. Edited by F. F. BURGHARD, M.S.Lond., F.R.C.S.Eng. (London: Henry Frowde, Oxford University Press, and Hodder and Stoughton, Warwick Square, E.C. 1909. Vol. IV. Pp. xxvi + 687; illustrations 351. Price 36s.)

THE fourth volume of Mr. Burghard's system of operative surgery consists of a series of articles upon those departments of surgery which are essentially the domain of specialists. Mr. Bland-Sutton is the only general surgeon who contributes to this volume; but he writes on a subject which he has made peculiarly his own—namely, abdominal gynaecological operations—and his present contribution is worthy of his reputation. He writes with an enviable lucidity, and this is particularly the case of his description of a radical abdominal hysterectomy, an operation which is associated in this country with the name of Wertheim. We see no advantage in the use of the term "metastatic bacteriæmia" instead of puerperal sepsis. It is perhaps more scientific, but it is not as expressive as the older name.

Dr. Phillips' article upon vaginal operations is also extremely good, and we have nothing but admiration for his description of operations for the repair of complete lacerations of the perineum. It is both terse and helpful, and the illustrations which accompany the text give one an extremely clear idea of the procedure. Mr. Mayou writes upon operations upon the eye. The arrangement is good, and his descriptions are clear. The nomenclature is up-to-date and the illustrations are excellent. The operations upon the ear have been entrusted to Mr. Hunter Tod, who is already well known as a writer on this particular subject. We are most favourably impressed by his treatment of operations upon the mastoid process, a difficult thing to describe succinctly. But Mr. Tod succeeds entirely, especially in pointing out the essential differences between Schwartz's operation and the more radical one known as the Küster-Bergmann or Schwartz-Stacke operation. He also gives a most interesting account of the history of mastoid operations. His description of skin-grafting after mastoid operations is as lucid as the rest of his work. A very adequate account is also given of the operations which may be necessitated by the extension of septic processes from the ear—e.g. intracranial abscess and thrombosis of the jugular vein.

Laryngeal operations are described by Mr. Harmer, of St. Bartholomew's Hospital. One is struck on reading his article by the modifications in the technique of this science which have resulted from the perfecting of the direct method of laryngoscopy. A most instructive chapter is one in which the results obtained by the different extralaryngeal operations are compared; the value of laryngotomy, as a preliminary manoeuvre in operations upon the upper air passages is insisted upon, a contention in which all practical surgeons, who have any experience in these operations, must agree. In a chapter dealing with intubation of the larynx, Mr. Harmer writes: "Although intubation has received extensive trial, the published results show great variations and do not prove that intubation is superior to tracheotomy, but rather the reverse." This is a verdict which commands our entire concurrence. The operations on the nose are admirably dealt with by Professor St. Clair Thompson. The descriptions of operations for septal deformities and of those upon the frontal sinus are particularly excellent. We have the fullest confidence in recommending this volume to the profession. The articles are characterised throughout by a singular lucidity and freedom from unnecessary verbiage, which is as welcome as it is unusual.

SPRAINS AND ALLIED INJURIES OF JOINTS. By R. H. A. WHITELOCKE, M.D. (Edin.); F.R.C.S.; Lichfield Assistant Pathologist, Edinburgh Royal Infirmary. (London: John Bale, Sons and Danielsson. 2s. 6d. net.)

IN the treatment of many injuries of bones and joints the medical profession as a whole has in the past been compelled to readjust its conceptions of what is and what is not correct and proper. A generation ago the acuteness of Mr. Wharton Hood perceived that in one or two respects the bonesetter acted on principles which were surgically sounder and gave better results than those current among the profession, and his success compelled thoughtful surgeons to recognise that the enforcement of prolonged rest as a fundamental part of the treatment of all injuries is in many cases a mistake. This error, partly due to an overstraining of the ideas propounded in Hilton's classical work on rest and pain, is even now not wholly abandoned; but it is hardly to be imagined that it will survive much longer the onslaught of such uncompromising opponents as Mr. Whitelocke. As the author points out, the extension of x-ray examination to all kinds of obscure articular injuries has revealed all kinds of hitherto unsuspected fractures and fracture-dislocations, and the Workmen's Compensation Acts of recent years have made diagnosis, treatment, and prognosis of all injuries more than ever of importance. In a series of highly practical and well illustrated chapters, the author considers sprains in general and then their immediate and remote sequelæ, passing on subsequently to individual articulations and the especial difficulties and complications there encountered. Internal derangements of the knee very justly receive a separate chapter; and injuries to muscles and tendons, with an account of the indications for and against massage, movements, and exercises complete the volume. Throughout the book the principles of treatment in which Mr. Whitelocke believes, and which he has the most ample opportunities of practising and testing as a surgeon in a University town, are carefully laid down and explained. Nor is there anything of the blind partisan about his attitude: open operations are freely advocated for various conditions, but only on definite indications, and never if there is any equally useful alternative. So with massage, exercises, and ambulatory treatment of injuries generally. Mr. Whitelocke's surgery is in fact eminently sane, and his monograph can be recommended to all as a helpful contribution to this subject; to those who have to attend any section of the athletic world in which injuries are frequent, it will prove indispensable.

SYNOPTIC CHART OF CARDIAC EXAMINATION. Arranged by JOHN D. COMRIE, M.A., B.Sc., M.B., F.R.C.P.E., Assistant Pathologist, lately Clinical Tutor, Royal Infirmary of Edinburgh. (London: John Bale, Sons and Danielsson, Limited. 1909. 2s. 6d. net.)

THE author of this Chart has produced what we should describe as an ingenious toy, but we are afraid that it is not likely to prove of practical value to medical students. The Chart consists of an outline figure of a man, with certain apertures in it, behind which, by means of a moving tape, the names of different heart lesions are made to appear synchronously with the chief abnormal physical signs to which each lesion in its turn gives rise. The Chart is accompanied by a twelve-page pamphlet, in which are summarised the numerous symptoms and physical signs of various heart diseases. We think the Chart may be of interest to those who already know all that it can teach, but we doubt whether those who do not know will be likely to learn much from it.

PATHOLOGY.

THE BLOOD IN HEALTH AND DISEASE. By R. J. M. BUCHANAN, M.D., F.R.C.P., Professor of Forensic Medicine in the University of Liverpool, etc. Pp. xvi. + 318, with numerous illustrations. (London : Henry Frowde, Hodder and Stoughton. 1909. Price 12s. 6d. net.)

This volume is another of the "Oxford Medical Publication" series, and attains a high standard in the matter of printing and illustration. Some of the coloured diagrams of blood corpuscles in it are amongst the best we know. After dealing with the methods of estimating blood corpuscles and hemoglobin, and after describing in detail the various processes for fixing and staining blood films, the author devotes the rest of the book to the changes the blood undergoes, not only in the more definite blood diseases, but also in the majority of other conditions in which there are any blood changes at all. Nevertheless, we feel that there are a good many points that one would expect to find in the book, and which have yet been omitted. We have scarcely room to refer to all of these, and we must be content with mentioning one or two only. In a work to which, according to the title, one should be able to refer for any points in regard to the blood upon which one needed information, one is surprised to find Widal's clumping reaction is but vaguely described, and that the dilution of 1 in 200 is not insisted upon as it ought to be. Malaria, trypanosomiasis, and other parasitic affections of the blood have been entirely omitted upon the ground that they belong to the special dominion of tropical diseases. Although Dr. Buchanan's book is good so far as it goes, practitioners may be disappointed by failing to find in it many things which they might have expected to find in its title.

THE CAMPAIGN AGAINST MICROBES. By ETIENNE BURNET, M.D., of the Pasteur Institute, Paris. Translated by E. E. AUSTEN, F.Z.S. (London : John Bale, Sons and Danielsson, Limited. 1909. Price 5s. net.)

The title of this book gives little idea of its subject-matter. This is no treatise upon disinfectants, but a series of articles upon Cancer, Tuberculosis, Tetanus, Sleeping Sickness, Enteritis and Intestinal Microbes, and Variola. Each article is drawn up upon similar lines, the author tracing in a clear and concise way the chief experiments and observations that have led up to the present stage of knowledge upon each of the above subjects. The evidence is given fairly and without bias; even though Dr. Burnet obviously holds the view that a microbe or a parasite is at the root of cancer, he gives the pros and cons with such honesty that he clearly wishes the reader to draw conclusions from the evidence rather than from his own personal opinion. Those who are already familiar with the experiments discussed may find too little detail in the volume; but practitioners who would like to be made *au fait* with the lines along which laboratory workers are attacking the problems of the campaign against these diseases will find this book most pleasant and useful reading. It is likely to be read by certain of the laity also, and with advantage in many ways, particularly as a summary of some of the immense benefits that are being derived from physiological, bacteriological, and other experimental methods of research. It is good to see the esteem in which Dr. Jenner is held in France. The account of him in the article on Variola is most pleasing. It is also interesting to note that it is not in England only that people accuse themselves of being all behind the times. Dr. Burnet repeatedly laments that France moves too slowly in matters of public health.

HYGIENE AND PUBLIC HEALTH.

THE SANITARY OFFICER'S HANDBOOK OF PRACTICAL HYGIENE. By C. F. WANHILL, Major R.A.M.C., M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Eng., and W. W. BEVERIDGE, D.S.O., Major R.A.M.C., M.B., C.M.Ed., D.P.H.Camb. (London : Edward Arnold. 5s. net.)

This book has been written to cover the needs of the military branches of the medical profession, and the general scheme is that on which the training in the Hygiene Laboratories, Royal Army Medical College, is carried out, and there found to be satisfactory both for military purposes and for preparation for the examinations for the diploma of public health. The authors, who are respectively assistant professor of hygiene, Royal Army Medical College, and analyst to the Army Medical Advisory Board, state in the preface that processes and apparatus not usually found in small laboratories in distant lands are as useless as a cookery book to an inhabitant of the Soudan. They also state that teaching of the subject is not attempted, it being assumed that the reader has had previous training and requires merely to refresh his memory with regard to details. The book contains chapters on Water, Sewage, Ventilation, Analysis of Foods, Analysis of Beverages, Calculation of Diets, and Bacteriology, together with two appendices dealing respectively with chemical and bacteriological details. It has a well-arranged index, and is interleaved throughout with blank pages for additional notes. Very clear instructions are given as to the best methods of water and sewage analysis, including the preparation of standard solutions. Useful notes on the various processes, together with examples, have been given. In the instruc-

tions given for estimating the amount of carbon dioxide in air by Pettenkoffer's process we should prefer to advise the student to dry very carefully the bottle before taking the sample of air into it. The water which is left in the bottle after filling with water and inverting the same will produce variable results in the amount of carbon dioxide estimated. We prefer the use of bellows in taking samples of air. The chapters on the Analysis of Foods and Beverages are clearly arranged. In the chapter on Bacteriology a table indicating the cultural differences between various bacilli is a useful addition. Details as to the preparations and standardisation of media have been given. We are sure that the book will be of the utmost value to those students who have attended the authors' classes; but as a rule students who have attended classes in preparation for the examinations for the diploma of public health elsewhere prefer to rely on the practical notes given to them by their own teachers, supplemented by one of the larger textbooks in common use.

THE DIETETIC TREATMENT OF DIABETES. By B. D. BASU, Major I.M.S. (retired). (The Panini Office, Bhuvaneshvari, Ashram, Allahabad, 1909. Rs. 1-8-0.)

An excellent little work, which should prove of decided value to every practitioner. It is written in a thoroughly practical fashion, and is somewhat more than a mere compilation of extracts from the authorities. What it gives is up to date and lucidly stated. Major Basu's little work ought to become a popular one; at any rate we can thoroughly recommend it to the practitioner who is interested in the subject with which it deals.

MISCELLANEOUS ITEMS.

THE AFTER TREATMENT OF OPERATIONS. By P. LOCKHART MUMMERY, M.B., F.R.C.S. (London: Baillière, Tindall, and Cox. Third edition. 1909. Price 5s. net.)

WHEN this well-known text-book was first published, six years ago, the subject with which it deals was almost entirely neglected in surgical literature; even in the largest and most pretentious works on operative surgery it received very inadequate attention. In consequence, dealing as it does with an aspect of surgery very important indeed to the general practitioner and to the surgeon practising in the country or abroad, it proved a perfect godsend to very many medical men and met with a well-deserved success. Since then much more attention has been paid to the management of patients after operation, and the progress made in this field has been very great. The author himself observes in the preface to this new edition that probably in no branch of surgical technique has improvement been more marked, and it is not difficult to agree with him. He has, in revising the chapters for republication, chosen with discretion those which have gained most universal approbation of these changes and improvements; to have included every suggestion would no doubt have resulted in a cyclopædia instead of a compact and convenient manual. Still, one misses one or two of the newer points which might, perhaps, have been included with advantage. The index remains, as before, much too fragmentary to be of any great use; but, apart from these minor criticisms, Mr. Mummery's book well maintains its old reputation as one of those inexpensive monographs which, to the house-surgeon, the practitioner, and all those who may be called upon to undertake the care of an operation case without a ripe experience, is worth far more than a shelf full of bulkier and dearer, but less practical, text-books.

A PRACTICAL TEXT-BOOK OF MIDWIFERY FOR NURSES. By ROBERT JARDINE, M.D. Edin., M.R.C.S. Eng., F.F.P. and S. Glasg., F.R.S. Edin. With 49 illustrations. Fourth edition. Pp. 304 + xv. (London: Henry Kimpton. 1909. Price 5s.)

CAREFUL perusal of the fourth edition of this little book fully explains the reason of its continued popularity. Written in simple language, with clear definitions and accurate statements of fact, it would seem to fulfil all the reasonable requirements of the class of student for which it is primarily intended. One or two small defects are, however, noticeable, the most serious of which is the absence of a definition of the "lie" of the fœtus. The volume is well printed, in clear type, and the illustrations are excellent. It can be recommended to nurses, and will repay perusal by medical students who are in want of a concise account of their duties on the "district."

ONE HUNDRED AND TWENTY YEARS OF LIFE AND HOW TO ATTAIN THEM. By CHARLES REINHARDT, M.D. Pp. 50. (The London Publicity Company, Limited. 1909. Price 1s.)

THERE are a number of publications now appearing upon the general subject, "Lactic Ferments, the cure for nearly everything," and this is one of them. We quite believe that there is a great deal in the Bulgarian bacillus treatment; but we think that more weight is being put on it than it will carry. The arguments seem to be based upon two separate ideas, and we are not convinced that either of them is correct. The first argument is as follows: In proportion to our population we have only one centenarian in this country to one hundred and eighty-seven in Bulgaria. In the latter country sour milk has been the national diet for

ages; therefore if only we drank sour milk too we should be centenarians also. The second argument is as follows: Bulgarian lactic acid bacilli, introduced into the bowel, inhibit the growth of other putrefactive organisms there; intestinal putrefaction causes auto-intoxication and premature senility; therefore lactic bacillary treatment leads to longevity. We think that the conclusion is unwarranted in the first argument, and the second premiss has never been proved in the other. We do not believe that the sour milk treatment is the panacea Dr. Reinhardt and other authors would make it out to be. The booklet has no index. It mentions several firms from which the various articles and products described in the text are to be obtained, and it concludes with a series of advertisements of those firms themselves. Two points need special mention. We think the Cyllin treatment as a preliminary to the use of the lactic ferment is likely to be good; and the practical suggestion that "typhoid carriers" may be curable by the lactic acid bacillus (p. 27) opens up a means of relief to a condition which has recently become one of considerable importance and difficulty.

THOUGHTS AND PASTIMES. By M. E. R. (London: Kegan Paul, Trench, Trübner and Co. 1909. Price 3s. 6d. net.)

THIS volume of verse is published with a view to aiding the funds of the Great Ormond Street Hospital for Sick Children, and it is dedicated by permission to Her Royal Highness the Princess Royal, vice-patron of that institution. We approve highly the motive and intentions which have inspired the publication of the volume, but regret we cannot honestly find much else in it to approve. The verses are crude in the extreme: the piece entitled "The British Empire" is enough to make angels, much more reviewers, weep; and there are other pieces nearly as bad.

THE WHITE PROPHET. By HALL CAINE. (London: Wm. Heinemann, 1909. Two vols., small 8vo. 4s. net.)

THIS book is noticeable as the first of Mr. Heinemann's new library of modern fiction series. As such it is undoubtedly interesting, regarded merely from a technical point of view. The type is long primer leaded, and the spacing is everywhere excellent. The paper is unglazed with wide margins, and there is a really admirable scarcity of printers' errors in the text. Add to this that each volume is light in weight and convenient in size, and it will be seen that the medical critic, who should, in discussing the make-up of a book, pay due regard to the fact that there are such things as eye strain and visual errors—a fact which the majority of publishers utterly disregard—can have only praise for Mr. Heinemann's venture. The series should be a popular one with book-lovers—if the literary fare provided is as good as the typographical medium in which it is served. Unfortunately the series opens with a weak story which has neither much interest nor literary merit, and which will not add greatly to Mr. Caine's reputation.

BOOKS RECEIVED.

- THE PANINI OFFICE, BHUVANESHWARI ASHRAM, INDIA.
 "The Dietetic Treatment of Diabetics." By B. D. Basu.
 HODDER AND STOUGHTON.
 "Religion and Health." By Len. G. Broughton, D.D.
 JOHN MURRAY.
 "Humours of the Country." Reprinted from *Farm and Home*.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND ECONOMICS.

THE GLASGOW CANCER HOSPITAL (FREE).

DESCRIPTION OF NEW BUILDINGS.

For a very long time the supporters of the Glasgow Cancer Hospital have realised that in order to carry out the work the hospital would require to be rebuilt, or more extensive premises acquired in another part of the city. The site of the old buildings in Garnethill on one of the highest eminences of the city was considered an ideal one, and after the managers had consulted with the staff they decided that the solution of the difficulty was to rebuild the hospital on the present site.

The portion now to be opened for patients comprises four large wards, each containing eight beds. These wards are lighted from three sides, the principal light being from the south. Although the site is a limited one, the buildings have been so arranged that the wards to the north project beyond the south wards, have the advantage of receiving a south light, and have also a south balcony.

In addition to the wards for eight beds, nine single rooms have been provided, all with a southern exposure. These will be used for patients requiring isolation. A convalescent ward has also been provided. All sanitary annexes are contained in towers, which are entirely cut off from the wards, and are fitted up with the most approved pattern of baths, lavatories, and basins. Various fittings and furnishings specially suited for the particular class of patients to be treated have been installed, which should add very materially to the convenience in nursing and comfort of the patients. On each flat a large surgical dressing-room is provided, fitted up with suitable basins, sterilisers, etc., so that all surgical dressings may be carried out in this room.

The beds are of the "Balcony" pattern, so that patients can be removed from the ward to the surgical dressing-room and wheeled back again to the ward with the least possible inconvenience and the minimum of discomfort. An operating theatre will be provided on each ward level.

The top of the building has been fitted up as a research department. The light here is from the north, and as the building stands on a very high eminence, the light is ideal

for a city site. On the basement is placed a fully equipped kitchen, which is ventilated by means of an electric fan, so that the odour of cooking will not permeate any part of the hospital.

The nurses' home occupies the western portion of the site. Each nurse is provided with a separate bedroom. There are also dining-rooms, sitting-rooms, etc., along with the suite of rooms for the matron.

Behind the main building a complete and up-to-date laundry has been erected, in which the most modern machinery has been installed, worked by electricity, and, in addition, there is provided a destructor and steam disinfecter. Quite detached from the main building a small mortuary and mortuary chapel have been erected.

The buildings are lighted by electricity, and are heated on the "Reck" system by means of radiators. Each radiator is under direct control, and has a supply of cold air guarded by a regulator, so that any portion of the building may be heated to the required temperature. There is a complete installation of telephones.

The patients will shortly be removed from the old portion of the building into the new wards, in order that the older portions remaining may be entirely rebuilt, and in six months it is hoped the whole building will be finished. The entire buildings will then be on modern lines, as they are designed in every detail for the particular class of work which is to be carried out. The directors confidently believe that when the Glasgow public fully appreciate the boon which such an institution will be to the community of Glasgow, the needed support for its upkeep will be forthcoming.

The entire buildings and equipment have been carried out under the supervision of Dr. D. J. Mackintosh, superintendent of the Western Infirmary, Glasgow, and by Messrs. James M. Monro and Son, architects, Glasgow. Sir George T. Beatson, K.C.B., M.D., who is the senior surgeon of the staff, has taken a deep interest in the whole scheme, having acted as chairman of the Building Committee.

INSTITUTIONAL NOTES AND NEWS.

LEGACIES TO HOSPITALS.

In the House of Commons last week Mr. Murray MacDonald asked the Secretary to the Treasury whether he was aware that in Ireland all legacies to hospitals and other charities were exempt from legacy duty; and whether, in view of the increasing difficulty of finding money to manage hospitals, the Chancellor of the Exchequer would insert in the Finance Bill a provision extending this exemption to Great Britain. Mr. Hobhouse, replying for Mr. Lloyd George, stated that the latter was aware of the Irish custom, but regretted that he could not see his way to accept the suggestion contained in the latter part of the question.

THE WEMYSS MEMORIAL HOSPITAL.

The Wemyss Memorial Hospital, given by Lady Eva Wemyss to Wemyss parish, has been formally handed over

to the trustees. The hospital contains wards for women and children, operating-room, doctors' and nurses' rooms, caretaker's house, chapel, and mortuary, and has cost about £5,000. Mr. Carlow, chairman of the Fife Coal Company, Ltd., who presided at the opening, said the hospital was to serve a twofold object—the alleviation of suffering and as a memorial to one whose loss they deplored, whose name would be handed down as the greatest benefactor of the parish, because of the ability and energy displayed in developing the villages, in opening new pits, providing facilities for disposing of the produce in new docks, and for travelling on the tramways.

JOTTINGS.

The new and old buildings of the City Hospital, Aberdeen, are to be installed with electricity, at a cost of £500.

The Grand Lodge of Freemasons has sent £500 to the National Hospital for the Paralysed and Epileptic.

NEWS AND COMING EVENTS.

AMONG the latest contributions to King Edward's Hospital Fund for London is the sum of £105, being the annual subscription of his Majesty the King, founder and patron of the fund.

THE National Association for Promoting the Welfare of the Feeble-minded has convened a Conference of After-care Committees to be held at Leicester on Thursday, October 28. Members of boards of guardians are being asked to send representatives.

SIR EDGAR SPEYER will take the chair at a festival banquet at the Whitehall Rooms, Hôtel Métropole, on Wednesday, November 24, for the purpose of raising the sum of £12,000 in aid of the Great Northern Central Hospital, which, unless immediate help is forthcoming, will have to close at least 50 beds by the end of the year.

THE distribution of prizes and an address to the students of Charing Cross Hospital Medical School will take place in the out-patients' hall at the hospital (entrance in King William Street), on Monday, October 4, 1909, at 4 o'clock, by the Right Hon. the Viscount Ridley (Chairman of the hospital). Tea and coffee will be served at the conclusion of the proceedings.

LORD TREDEGAR last week opened extensions, costing £10,000, to the Rest, Porthcawl, a convalescent home. Lord Tredegar said that in the days when the institution was founded, half a century ago, the word rest was quite a new one. Now rest was the medical way of dealing with all ailments when they did not know what else to do. The nation had realised the importance of trying to make children healthy before teaching them the ABC.

THE Anglo-American Oil Company's steamer *Cheyenne*, which put into Falmouth the week before last with suspected cases of cholera on board, left for America last week after having been in quarantine for four days. It is stated that the men in question were not suffering from cholera, but from severe dyspepsia after indiscretions in diet. The port sanitary medical officer granted the *Cheyenne* a clean bill of health at the request of the American Consul at Plymouth.

THE date of the third International Congress of School Hygiene, to be held in Paris next year, has been postponed, so we are officially informed, from the end of March, 1910, to the first week of August, 1910. The Congress and Associated Exhibition will accordingly be open from August 2 until August 7 of next year. The French Organising Committee state that this postponement has been asked for from several quarters, and is generally considered advisable.

THE Baroness von Eckardstein has consented to open the sale of patients' work at the British Home and Hospital for Incurables, Streatham, on Wednesday, November 24. The money raised at this sale does not go to the general funds, but is distributed amongst the patients, and thus provides them with a little pocket money for the year. Articles for the sale for the benefit of those patients who are too afflicted and crippled to work for themselves, and donations will be acknowledged by the Secretary, Mr. Edgar Penman, 72 Cheapside, E.C.

THE autumn term of the School of Massage and Electrical Treatment, recently instituted at the Hospital for Epilepsy and Paralysis, etc., Maida Vale, commences on September 20. Applications for admission should be sent to the Secretary of the hospital without delay.

AN outbreak of beri-beri is announced to have occurred on board the Brazilian cruiser *Carroza*, recently arrived in the Tyne with men for the new battleship being built there for the Brazilian Government. It was found necessary for the Tyne Port Sanitary Authority to remove five men to the floating hospital suffering from the disease, and one of them has died.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, PADDINGTON, W.—The opening of the Winter Session will take place on Friday, October 1, when the prizes and awards for the sessions 1908-9 will be presented by Dr. H. A. Miers, F.R.S., Principal of the University of London, at three o'clock. The annual dinner of past and present students will be held at the Café Royal, Regent Street, at seven o'clock the same evening.

ACCORDING to the St. Petersburg correspondent of the *Times*, the City Councillors of that city have resolved upon the immediate construction of additional filters on the plans and terms offered by the firm of Siemens and Halske. The only other competitor was a Russian firm. Cholera last week continued to claim there an average of 25 victims daily. The total for the year is: 5,769 deaths, of which 88 per cent. are among the working classes. Preventive inoculation was applied to 53,162 inhabitants, of whom only 12 contracted the disease, and eight of these recovered.

THE official opening of the 75th winter-session of the Medical School of the Middlesex Hospital will take place at the hospital on Friday, October 1, at 3 p.m. The introductory address will be delivered by Dr. J. Strickland Goodall, the Lecturer on Physiology, after which the prizes gained during the previous year will be distributed by Mr. E. H. Shackleton, C.V.O. Admission to the opening ceremony will be by card only, and applications should be made to the Secretary-Superintendent, Mr. F. Clare Melhado, as early as possible, as the seating space will be rather limited. In the evening the customary banquet of past and present students of the Medical School will be held at the Trocadero Restaurant.

OBITUARY.

THE death is announced of Dr. Thomas Bridgwater, M.B., LL.D., M.R.C.S., a former medical officer at Harrow School, at the age of 85. Dr. Bridgwater qualified M.R.C.S. and L.S.A. in 1847, and five years later obtained the M.B. of London University. Forty-five years ago he was appointed medical officer at Harrow, and he held this post until his retirement in 1899. In 1888 Dr. Bridgwater received the LL.D. degree of the University of Glasgow. He had been house physician and house surgeon at King's College Hospital, and was an Associate of King's College and a Fellow of the London Medical Society. After his retirement from practice Dr. Bridgwater lived at Uckfield, in Sussex. He was a Justice of the Peace for Middlesex and Westminster.

NURSING ADMINISTRATION.

PATIENTS' PAYMENTS IN DISTRICT WORK.

As district work expands and takes root in one fresh neighbourhood after another, the question of payment or contributions from patients becomes very important. Is the boon of nursing in sickness to be one which the rich bestow on their poorer friends, or should nursing be built up on a self-supporting basis, so that all draw together for a common purpose and have equal responsibilities and equal rights? Few would dispute that the latter course is the ideal to keep before the community, but it would appear from an examination of the facts that we are yet a long way from attaining that ideal, and that the short cuts to setting sick district nursing on an independent basis which are in practice in some localities are retarding rather than advancing the principle of justice in community life. In the first place it must be fully recognised that nursing is a costly luxury, out of the reach of people with small means, and generally, it may be said, of wage earners. The cost of district nursing, unless it be a wide organisation enabling the nursing to be done without waste of labour, may be estimated at from 1s. to 1s. 6d. a visit, and at an average of about 10s. a case. Under the Holt Ockley system of resident nurses the cost is seldom much less than £2 a case. An attempt is frequently made to assess the amount which each family ought to pay for blessings common to all. For this purpose the residents in a parish are divided into four classes—labourers, artisans, small shopkeepers and farmers, large farmers and professional men. Outside this list stands the landowner or man of independent means. Sometimes the division is effected on the rateable value of the house occupied. But in either case the individual is told that his contribution is to be 2s., 3s., 5s., or 10s., as the case may be, with a tacit understanding that the deficit must be made up out of the uncovenanted mercies of the rich. The system has several drawbacks. In the first place it is slightly inquisitorial. Then it is manifestly unfair, for the people with large families cannot under any system of classification be differentiated from childless couples. Again, it is very cumbersome, for it involves the collection of very small sums, often reluctantly given, which make up but an inconsiderable fraction of the cost. It is highly inconvenient; for how is it possible for the district nurse to neglect the sick poor who will not pay for her services? Lastly, it lays down a basis of contribution incapable of logical justification. Considered as payment, 2s. a year is not adequate; considered as donation it is manifestly far too much. This will become apparent if we examine the income at the disposal of the average labourer and that of his "betters." The agricultural labourer with six children earning 18s. a week is a fairly prosperous specimen of his class. Divide his income among the members of the family and the result is 2s. 4d. a week each. On this, house rent, food, clothing, medical relief, means of locomotion and recreations have to be provided for each person. It is done, often extremely well, but if the mother of the

family should tell the friendly visitor anxious for their welfare that they cannot afford to pay for a trained nurse, is it remarkable? Contrast the income of this class, who are expected to contribute on the basis of 2s. a year to the fund, with the income of the small professional man who helps to organise the work. A man and his wife with private means of £400 a year are poor. With two children and £600 a year they are still poor. A lady living alone on £200 a year is very poor. Yet in all three cases the available weekly income for each member of the family is £3 16s. 11d., as contrasted with the labourer's 2s. 4d., and the extent of their contribution should logically be thirty-three times as much. Divide the half-guinea commonly expected for the nursing fund from gentle-folk with small means by thirty-three and the equivalent is seen to be no more than 3½d. The basis of contribution breaks down in theory and in practice. In practice it gives an immense amount of trouble, and does not begin to make both ends meet.

But would you pauperise the labourers, it is asked with an anxiety which leaves altogether out of the question the true meaning of the word pauperise? A pauper is one who is supported by rates compulsorily levied on other members of the community. What has pauperism to do with a free gift generously bestowed on struggling mothers, on indigent old people, and ailing babies, by neighbours less heavily weighted down by the burden of poverty and hard work? "It blesseth him that gives and him that takes. . . ." Regarded in one aspect it is a luxury, for which the poor, even the struggling farmer or shopkeeper, the straitened parson or doctor with big families and depleted purses are quite unable to pay. Regarded from another point of view, it is an educational force of the highest social importance, which the ignorant and the neglected among the community do not yet appreciate, and which must be very gently and tactfully introduced into rural life if it is to do its perfect work. It is usual to say lightly no one is so poor that they cannot provide 2d. a month. But multiply this sum by thirty-three to make it answer to a small independent income, and its purchasing power to the labourer is revealed as 5s. 6d., and which of us would look amiably at the kind lady who called every month for this sum? There is perhaps no other free gift which we may press upon our neighbours with such confidence in doing them no mischief as that of skilled nursing in their hours of need.

Under wise management the poor will do their share. They will pay most thankfully for midwifery. They will contribute in most liberal and unexpected ways to the common fund of their own free will, and if the contributions be invited in some manner congenial to their incomes, through the institution of "pound day" or a local rummage sale, they will show splendid enthusiasm in making the function a success. But let us free ourselves from the pretence that district nurses can ever be made self-supporting by enforced contributions.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR SEPTEMBER 20 TO 25.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

At 4 p.m.

Sept. 20, Dr. George Pernet, **Skin.**

Sept. 21, Dr. C. O. Hawthorne, **Medical.**

Sept. 22, Mr. E. Laming Evans, **Surgical.**

Sept. 23, Sir Jonathan Hutchinson, **Surgical.**

Sept. 24, Mr. Claud Worth, **Eye.**

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, LEICESTER SQUARE, W.C. CHESTERFIELD LECTURES.

These lectures, founded in 1895 in connection with a silver medal presented by the Earl of Chesterfield to promote the study of dermatology (and which is open for competition to those who have attended three-fourths of the lectures), are free to medical practitioners on presenting their cards and to medical students who desire to attend regularly, and will be resumed at 49 Leicester Square on Thursday evening, October 7, at 6 p.m. The Chesterfield Lecturer, Dr. Morgan Dockrell, will give his opening lecture on "The Danger to the Community of the Beauty Specialist—So-called." After each lecture demonstrations will be given on special cases, followed by clinical instruction up to eight o'clock on patients presenting themselves in the out-patient department. The lectures deal practically with diagnosis and treatment, and are illustrated by large diagrams, clinical and microscopical.

SYNOPSIS OF LECTURES.—October 14 and 21, Bullous and Vesicular Eruptions. October 23, Paratuberculides (due to Tuberculous Toxins). November 4, 11, 18, and 25, Syphilis. December 2, Baldness. December 9, Fungous Diseases of the Skin. December 16, Ul-erythema.

THE Metropolitan Asylums Board has made arrangements for two separate courses of lectures and demonstrations in hospital administration for the benefit of candidates for the Diploma in Public Health. They will begin respectively on the first Monday and the first Wednesday in October, and, except that they will take place at different institutions, will cover the same ground. The courses will last three months, and the lecturers are Dr. McCombie, of the North-Western Hospital, and Dr. F. M. Turner, of the South-Eastern Hospital. The fee is £3 3s.

AN Appointments Board has been constituted by the University of London. The terms of reference to the Board are "to assist graduates and students of the University in obtaining appointments, and to co-ordinate and supplement the work done by the schools and institutions of the University with this object." Graduates are invited to assist in furthering the work of the Board, the aim of which is to encourage the selection of University men for all posts in the work of which the possession of a University training on scientific methods is an advantage; to assist graduates to find employment, and to assist employers to find, in the University ranks, suitable men for vacancies. It would assist the Board if, whenever graduates know of any vacant appointments suitable for University men, they would communicate with the secretary of the Board, so that he may put forward selected candidates. In this way the work of the Board as an employment exchange would be greatly helped.

A SUPPLY of copies of the Revised Syllabus of Physical Exercises, which the Board of Education announced would be kept back until the third week in September, has now been made by the printers, and copies are procurable from the Government sale agents.

EXHIBITION OF HYGIENE FOR THE MIDLANDS.

THE Incorporated Institute of Hygiene announces that Sir William Bennett, K.C.V.O., F.R.C.S., President of the Incorporated Institute of Hygiene, will perform the ceremony of formally opening a permanent Exhibition of Hygiene on September 30, which is being established at Carlton Buildings, Paradise Street, Birmingham, under the auspices of the Midland Counties' branch of the Institute.

CHOLERA PRECAUTIONS.

THE Local Government Board have lately issued the following circular addressed to port sanitary authorities and certain riparian sanitary authorities:—

Sir,—I am directed by the Local Government Board to state that cholera, which has been, and still is, epidemic in Northern Russia, particularly in the St. Petersburg district and at Archangel, Cronstadt, Riga, and other Baltic ports, has now extended to Holland, and that several cases and deaths have already occurred at Rotterdam and in the vicinity.

The sanitary authorities of British ports trading with Rotterdam, or with North Russian ports, should be on their guard against the importation of cholera into their districts by vessels coming from places where the disease has appeared or is likely to appear. In this connection it is essential that the medical officers of health of such British ports should endeavour to keep themselves informed as to the spread of the present outbreak of cholera, and especially as to the continuance of the disease in ports where it now exists and its appearance in other ports not yet known to be affected by it. The Statement which the Board issue weekly to the medical officers of health of port and riparian sanitary authorities, and which contains information as to such cholera occurrences as have come under the Board's notice, will be of assistance in this direction.

I am to remind you that on September 9th, 1907, the Board issued a revised General Order relating to cholera, yellow fever, and plague on ships arriving from foreign ports. The Board rely on the port and riparian sanitary authorities taking all necessary steps under that Order to prevent the introduction of cholera into this country.

The Board will be glad if you will supply the medical officer of health with a copy of this Circular.

I am, Sir, your obedient Servant,

S. B. PROVIS, Secretary.

Local Government Board, Whitehall, S.W.

September 2, 1909.

THE HOSPITAL

SEPTEMBER 18, 1909.

Name

Address

This Coupon must accompany manuscript or contributions intended for THE HOSPITAL.

The Hospital

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SATURDAY, SEPTEMBER 25, 1909.

THE MODERN HOSPITAL.

SIR HENRY BURDETT has been engaged for the past month in making an inspection of the principal hospitals in South, West, and Middle England, and in Wales. He has made a report upon each institution visited, and has been welcomed everywhere with a cordiality and consideration which testify to the vitality of the management and work of the modern hospital all over the country. When Sir Henry Burdett began his hospital work in Birmingham, forty-two years ago, the public was prejudiced against hospitals—a feeling which was justified by the fact that one in three of the patients who underwent major operations died. To-day the mortality in these cases is probably less than three per cent. There was the further objection that trained nurses, as the profession knows them nowadays, were unknown, and the structural, hygienic, and general condition and comfort of the hospitals, according to modern notions, were lamentable in the extreme. Hence the hospitals of those days were places which filled people with dread which no one entered willingly or at all if it could possibly be helped.

These facts make Sir Henry's experience of upwards of forty years as an active hospital worker of very real interest to the profession and the public. Mr. Holmes and Dr. Bristowe inspected, and made a report on, the hospitals at the request of the Privy Council in 1865, three years before Sir Henry took charge of a hospital. During all this period, working in the very centre of hospital life and movement, being consulted by hospital managers in many countries, and having inspected most of the principal hospitals of the world, his present tour of inspection has been welcomed by hospital authorities, and his reports are looked forward to with keen anticipation. They will form a chapter in the history of the development of these institutions which cannot fail to prove of interest and value. We have felt that they may properly be made the occasion of a new departure in medical journalism.

For nearly a quarter of a century THE HOSPITAL has led the van in every movement which has tended to promote the improvement and development of hospitals, and has so done much to build

up the modern hospital as it is to-day. Each voluntary hospital forms a little republic in itself, where the keenest interest is taken by the many zealous workers who constitute the medical and resident staff, to whose ability and devotion the public owes the security of the modern hospital.

We have decided to commence a new series of THE HOSPITAL with our issue of October 2, 1909. We feel it to be due to the workers in our hospitals that they should have a newspaper which will strive to do justice to all who labour for the sick, for in them is vested the splendid privilege of ministering to the alleviation of human suffering with a success which is as glorious as it is remarkable. We shall endeavour to show how the modern hospital is worked, who are the men and women to whom the public owes more than it can ever repay, and how the present success has been secured. We shall further record the developments in treatment, in construction, in administration, and throughout each department, as they occur, so that the workers may be encouraged, the finances of the hospitals improved, and the public enabled to take a more intelligent interest in the administration of hospitals than has yet been possible. We shall make it our business to help every one who is interested in hospital work by enabling them to find in THE HOSPITAL the fullest and most up-to-date information, whilst they will be encouraged to send us particulars of all matters in which they are specially engaged or interested, and to ask for information through the Question Box department of THE HOSPITAL. Here they will readily ascertain any information of which they may be in search; and so be saved an infinity of time and trouble.

Finally, THE HOSPITAL, in its new form, will aim at doing justice to the spirit which animates all the best workers throughout the hospital world, without which no modern hospital can become efficient or continue at its best. The generous and warm welcome which Sir Henry Burdett has received in every hospital he has inspected bears striking testimony to the good-fellowship which prevails throughout the country in hospital matters, and is full of promise for the future. No

one can fail to read the reports of the present condition of our hospitals all over the country without gaining a mass of useful information and being cheered on his way to make ever greater and more self-denying efforts to secure the maximum of efficiency in every institution with which he may be connected. We rely upon the co-operation of all hospital workers, for their goodwill and steady support are essential to the success of this new departure. We know by experience that the thousands of men and women who are engaged in hospital work in the present day will be glad to have a newspaper of their own, and to do

what they can to make it the helpful friend and trusted counsellor of all who believe that if a thing is worth doing it is worth doing well. To the members of Committees and the Governors of hospitals we believe THE HOSPITAL, in its new form, will be found both interesting and helpful, whilst to the medical profession, and, indeed, to all who spend much of their time in hospitals, it will be our endeavour to make it indispensable as a trusted friend. It will be the Editors' first duty to do justice to everybody and to provide that every good work shall find in these columns just and full acknowledgment.

THE MEDICAL MIND.

ONE of the most philosophic of politicians confided lately that whereas he could support praise, or blame, with a reasonable amount of the fortitude proper to each case, yet he always felt nervous when he heard himself explained. The public is naturally enough always interested in an "explanation" of the medical profession—since its work concerns everyone so nearly—and therefore plenty of writers arise to supply the demand. Sir Arthur Conan Doyle "explained" in *Round the Red Lamp*, and in spite of the personal note sounded in the title, *Confessio Medici* owed some part of the interest it aroused to the same cause. *Round the Red Lamp* found a large audience; *Confessio Medici* (with a growing amount of subsequent work of identical authorship) a choice one: many medical men, then, will examine the latter with some trepidation, looking to see whether a certain fastidious conception of how they should be represented is realised. Not a few, perhaps, will be disappointed, will sympathise with the politician quoted.

One must not, of course, deny to the literary artist the right to choose his material; and, on the other hand, it is unfair to expect original genius for medicine to be accompanied by original genius for literary expression. Sir Thomas Browne's rare fancies will last as long as the language; but he could not finish anatomising a stranded whale because it smelt badly. John Hunter—inarticulate by comparison—would, it is entirely warrantable to suppose, have had a stronger stomach. Rich and rare as is the mental endowment of the anonymous author of *Confessio Medici*, to a certain class of professional critics he seems lacking in one important quality. His mind is not scientific, or, at least, it is not scientific enough to give laymen just ideas on medical affairs. One passage alone demonstrates this to the cold critic in question. Something in modern psychology revolts the writer's human sympathy, and he conveys admirably his great delight over something later still which upsets the first conclusion. Now, for the truth-seeker, the lover of truth at all costs, human sympathy would never come into the question at all. He would be glad of a result

which went to confirm a certain theory, but, even so, with the sobering recollection that he must guard against subconscious, or even conscious, mental bias. To him any fact in connection with a subject of study is *per se* a thing of intense potential interest, a bit of equipment for the game he loves so well—the game, that is, of putting things together, making something out of them, and then seeing if he is right after all. All the lyric touches in *Confessio Medici*, all the passages where clearly the mind is "red-hot behind the pen," concern matters of almost general human interest—early struggles, the growth of income, the four years of extra life given to an old woman. When the author touches, rarely enough, the scientific triumphs of medicine, he drops into what our hard, chilly critic would style, in the words of Rudyard Kipling, "ordinary journalistic prose." He mistrusts individual aspiration in the pursuit of culture beyond that involved in a busy clinician's life, and the more scrambling and competitive this is the more it seems to do his heart good to contemplate it. Rigid orthodoxy and ecclesiastical friendships are other ideals indicated. He hates Christian Science, not because it is erroneous, but because it does harm.

All this may be humane and practical enough, remarks our critic, developing his theme; but it is not the essential spirit of medicine, which is derived from the combative, questioning spirit of science. What has in all ages animated the elect of the medical profession, we hear him continue relentlessly, has been love of knowledge, not concern for humanity. Through prejudice or mistaken tact, biographers are misleading on this point; and yet it is recorded that Helmholtz, complimented on his benefactions to mankind, frankly replied that he merely set out to answer to his own satisfaction certain questions arising in his mind. Fiction, however, from this point of view, is often more truthful. Chaucer's Leech, Scott's Henbane Dwining (less the carefully infused raw-head-and-bloody-bones element), Balzac's Despleins—these pictures are not so taking to the ordinary layman as is *Confessio Medici*, but they represent much better to the cold, clear scientific eyes of our critic what he believes to be the essential medical mind.

ANNOTATIONS.

Christian Science and Death.

MANY readers will remember the so-called "Christian Science trial," which was held at the Old Bailey three summers ago, and came to an abortive end. The social position of the dead officer, and the fact that the prisoner was a qualified medical practitioner who had renounced his profession in favour of Christian Science, lent public interest to what was really a sordid and depressing exposure. From time to time the deaths are inquired into of credulous and misguided persons who have preferred the services of Christian Science "nurses" and "practitioners" to those of medical men. Lately a woman died at Worthing under such circumstances from phthisis, and the coroner's jury expressed their opinion of the matter in the following rider to their verdict: "that the practice of Christian Science, especially in cases of serious disease, is harmful, and greatly to be deprecated; and, further, that the taking of money for treatment is un-Christian." Legitimate medical practitioners are so often the victims of stupid and unnecessary riders from ignorant jurymen that some may feel glad to find a jury anxious to express in this form its views about Christian Science.

An American Physician on the Liquor Problem.

IN a recent issue of the *New York Medical Record* has appeared a short common-sense practical paper by Dr. Charles Rosenwasser on the Liquor Problem, which, in spite of the well-worn nature of the subject, deserves attention from English practitioners and sociologists. The author merely sets out to discuss the problem, and to make suggestions for its solution, in so far as it affects, and is affected by, present conditions in the State of New Jersey; but what he writes has a general application, which is not confined even to the United States. He maintains that the principal difficulties arising from the use of alcoholic beverages are due to two fundamental errors—each of which is also to be observed in this country. These are, firstly, impure products; and, secondly, an unsound system of handling these products. Whatever opposed views may be held upon the toxicity of alcoholic drinks when taken "in moderation," all medical authority is agreed that impure and improperly prepared alcoholic beverages are injurious. The State should therefore "so strengthen and enforce the pure food laws that those who drink will receive pure goods, and know just what they are drinking." As to the method of handling liquor, Dr. Rosenwasser sees in the American bar the greatest remediable evil; and his objections to the bar-system of dispensing strong drinks apply with equal force to the state of affairs in Britain. It is "especially vicious because it encourages men to drink when the stomach is empty, to drink hastily, and to drink more than they want." He would abolish the bar and the custom of "treating," and (by readjustment of

liquor taxation) encourage the use of mild alcoholic beverages, such as beer and light wine, in place of ardent spirits. Meanwhile the campaign of education must continue with increased vigour, especially amongst the rising generation; and in this matter "we should lay greater stress upon the physical effects of alcohol than upon the moral effects, for we know there is nothing so conducive to healthy morals as a healthy body." With regard to the three theoretical solutions of the liquor problem—"Prohibition," "Local Option," and "High Licence"—all of which have been tried in various States of America and elsewhere, Dr. Rosenwasser can find nothing good to say of any one of them. "Prohibition encourages the use of whisky in place of wine and beer"; "Local Option means local prohibition and local strife"; "High licence is of no value, and may, indeed, work harm." The whole tone and temper of Dr. Rosenwasser's paper strike us as appropriate and practical, and his views and suggestions largely coincide with those which we have long held, and often expressed or implied.

The London Medical Student.

WITHIN the fast-dwindling ranks of "doctors of the old school"—whose portrait gallery has lately been enriched by a little sympathetic study from life by Henry de Vere Stacpoole in "The Doctor"—there may be some who can remember, even at this distance of time, the appearance of Albert Smith's "London Medical Student" in the days of their apprenticeship or "hospital walking." To them, perhaps, the boisterous fun of these wild caricatures of early Victorian hospital life and manners, will recall in sharp definition the far-away scenes of irresponsible studentship, which, in common with other recollections of old age, are often far more vivid and exact than the intervening memories of manhood and maturity. But to the curious-minded medical student of to-day, when in an idle moment at some bookstall, he turns up an old battered original, or buys a cheap miniature reprint, of this rather jaded work of humour, the coarse frolics of his predecessors must seem even more remote and unsubstantial than those of the immortal Ben Sawyer and Bob Allen. Indeed, Albert Smith's extravagant portraits—drawn from within by one who quitted Medicine for a jocular by-path of Literature—cannot compare with the no less farcical contemporary types of medical immaturity drawn by the clear, bold, spontaneous pencil of Dickens. Nevertheless, to those readers who have not only what is called an inquiring turn of mind, but also a moderately elastic sense of humour, we can recommend Albert Smith's little volume of exuberant sketches of medical student life as it was, more or less, in a past generation. It is perhaps at its best as a means of diversion for some of those long hours of waiting which are the portion of our profession, but especially of those amongst us whose midwifery practice is "extensive and peculiar."

MEDICAL OPINION AND MOVEMENT.

A PRELIMINARY report appears in the *Münchener Medizinischer Wochenschrift* upon some research carried out by H. Conradi, of Neuenkirchen, upon the internal organs of healthy cattle and swine to determine whether or not they are free from bacteria. It is generally supposed that normal liver, spleen, kidney, and blood are entirely free from any microbes. On the other hand the lungs, mesenteric, and other glands may admittedly contain them. Conradi, however, finds bacteria present, although generally in very sparse quantities, in all these organs. He claims, of course, to use a special technique which absolutely excludes any possibility of contamination. Bacteria were found in nearly two-thirds of all the livers examined and in one-third of the kidneys and muscles. Bacteria were also present in four out of five lungs, one out of four lymph glands, and in one of eleven spleens. Anaerobic bacteria were very common. The types of organisms show that the majority belong to the intestinal flora. It is intended to continue these researches, and it seems possible that they may throw light upon the question of auto-infection and the relation between trauma and infection.

DRS. E. WEILL AND G. MOURIQUAND advise the administration of Oxygen as the most efficacious therapeutic measure in severe cases of Whooping Cough. Dr. Weill has used this method of treatment for some years in all cases of broncho-pneumonia in children, and has found more recently that it is equally useful for whooping cough. He claims that it not only hinders the development of broncho-pneumonia, but also rapidly diminishes the violence of the coughing fits and the consequent cyanosis. The cases treated in this way amount to about thirty, and may be grouped into two categories; in the one the intensity of the fits formed the chief danger, and in the other there was added the complication of broncho-pneumonia. Although oxygen inhalations may not actually cure a broncho-pneumonia focus, it is claimed that they act as an antiseptic purifying agent, and so prevent its extension. Moreover, whereas most of the drugs used to allay the intensity of the fits are depressants, oxygen inhalations are stimulating as well as sedative, and act as a tonic to the organism in the struggle with the disease. In cases of simple severe whooping cough the oxygen should be administered immediately on the onset of a coughing fit; but when broncho-pneumonia is threatened or present, it should also be given between the fits, about every hour. The authors are especially emphatic on the necessity of giving the oxygen freely—as much as 10 or 20 litres at the onset of each fit.

DRS. LABBE AND VARET, electro-therapeutists of L'Hôpital de la Charité, advocate the administration of Ozone in the treatment of Whooping Cough. The treatment was first used by Dr. Hellet, of Clichy, in 1890, and it has since been

employed and reported upon by several others. Drs. Labbé and Varet have treated eighteen cases since 1907, and a report of their work appears in the *Journal de Médecine*. The patients were brought to the hospital every day or every other day, and received the ozonic inhalations. The duration of the disease under this treatment was from nine to twenty-seven days, or a mean duration of twenty days, although most of the cases were of moderate severity, and some very severe. There were no complications: convulsions, epistaxis, or, above all, broncho-pneumonia. Sleep, appetite, and general well-being were quickly restored. No harmful effects whatever resulted from the treatment. The ozone was produced from a high-frequency apparatus with condenser, but the authors do not state exactly how they ensure the inhalation of the ozone so produced. Their results as reported are undoubtedly remarkable, and show a much greater efficacy for ozonic treatment than any other known therapeutic measure or drug, and they are especially interesting in view of the fact that a sojourn to the seaside frequently ensures a speedy disappearance of the disease. A further interesting point reported by these authors is that radiosopic examination of their patients revealed an abnormal hypertrophy of the bronchial and mediastinal glands, and they suggest that in view of this fact a possible tubercular infection as a consequence of the disease is not surprising. The question has been raised whether the spasms are produced by pressure of the enlarged glands on the superior laryngeal nerve, or are a result of irritation of the respiratory mucous membrane. As, however, these authors find that the glands remain enlarged after the spasms have disappeared, the latter hypothesis would appear to be the correct one.

INFLAMMATION of the Thyroid Body secondary to infection at some other point is of relatively common occurrence, but a case reported by Weber in *La Revue Médicale de la Suisse Romande*, in which an acute thyroiditis without suppuration occurred, is of interest because of its rarity. No primary focus of disease could be discovered anywhere in the patient, so that the inflammation would seem to have been idiopathic. The onset of the malady was very sudden with intense and prolonged initial rigors. In twenty-four hours the right lobe of the thyroid swelled to such an extent as to show beneath the skin as a lump the size of a hen's egg. Dysphagia, breathlessness, and neuralgic pains in the ear and the maxilla of the same side, were concomitant symptoms. During the following fortnight a slight diminution in volume of the right lobe was noticed, but at the same time the left lobe increased daily in size and became tender. During the fifth week of the disease the isthmus swelled, and the general condition of the patient grew worse. Improvement in the local condition was very slow, and it was not until the end of the ninth week that the condition was completely cured.

HOSPITAL CLINICS.

THE TREATMENT OF VARIOUS SYMPTOMS IN NERVOUS DISEASES.

By JAMES TAYLOR, M.D., F.R.C.P.; Physician to the National Hospital, and to Moorfields Eye Hospital, and Consulting Physician to the Queen's Hospital for Children.

(Delivered at the National Hospital for the Paralysed and Epileptic, Queen Square, London, July 6, 1909.)

GENTLEMEN,—We have all been taught to believe that nervous diseases as a class are of great intractability; that, whilst they are interesting clinically and pathologically, yet from the point of view of treatment they do not offer a wide field of interest because of the belief which is held that these diseases are very little amenable to the measures which we may employ for their relief. In some degree that is true, especially of diseases of the nervous system proper—diseases which are characterised pathologically by degenerative changes in the elements of the nervous system. But we must recognise that there are a great many nervous diseases, so-called, which are really not—primarily at all events—nervous diseases, but are diseases of other systems, in which the symptoms are due to interference with the functions of the nervous system. Take the most familiar example of this, a case of hemiplegia. No one dreams of looking at that as anything but a nervous disease, but if we regard its origin as the rupture of a vessel, we must recognise that though the symptoms are those of interference with the nervous system, the disease is really one of the vascular system. So also with reference to another common disease, a gumma of the dura mater. Suppose a patient has gumma of the dura mater, he has symptoms which are distinctly referable to the interference which this inflammatory disease of the connective tissue exerts upon the nervous system. But the disease is not really one of the nervous system, but a disease of the connective tissue. Neither a gumma of the dura mater nor a cerebral hæmorrhage can correctly be called a disease of the nervous system; but no one fails to recognise that by far the most prominent symptoms in those two diseases are those which result from interference with the function of the nervous system.

Many nervous diseases are the result of the action of toxic substances on the nervous system. And sometimes these toxic substances are in a very active and virulent form, and sometimes in an attenuated form. Let us consider diphtheritic paralysis. That is a disease in which we know there is a toxin present which poisons the nervous system. In some cases the poison which has this effect is virulent in its action, leading rapidly to the death of the patient. In other cases the poison is not nearly so virulent: the patient may only have a slight degree of weakness of the limbs; he may have some ocular palsy, with some other symptoms of interference with the functions of the nervous system; but he may after a time completely recover. I think this is a very suggestive illustration of the way in which toxins may affect the nervous system.

The disease which is known as Landry's or acute ascending paralysis is rightly regarded as one of the most certainly fatal—and very often rapidly fatal—of all nervous diseases. But any one who has had the opportunity of watching several cases of nervous

disease knows that many cases of Landry's paralysis, strictly so-called, in which the symptoms are all present, in which there is evidence of some poisoning of the nervous system, completely recover. I have seen here at least three cases in which I think there was no doubt in the minds of any one who saw them that they were strictly cases of Landry's paralysis, cases of toxic paralysis which did not end in the usual way. In certain other cases there are poisonous substances which affect the nervous system when given, so to speak, in repeated doses. A patient has an illness which is characterised by some degree of paralysis, and after a time, and under appropriate treatment, that patient may get a good deal better. But presently another dose of poison appears to be elaborated, and all the old symptoms come back, but in a somewhat stronger form; and at the end of the second attack the patient is left considerably weaker than he or she was after the first attack. And that may go on indefinitely. I am drawing no fancy picture, because that is frequently the history in cases of disseminated sclerosis. In many such cases the patient has an attack of illness characterised by profound paralysis; but after a time that may pass away so completely that the patient is seen to be scarcely paralysed at all. After a time the patient has another illness, and the symptoms return with renewed force, and after the second attack they do not disappear to anything like the same degree as after the first. And that may go on indefinitely, until after a time the patient is left completely paralysed. One knows there are cases in which, apparently, the first attack of the poisoning is the last also; because one has seen cases here in which the patient has come with a history of acute illness and all the signs and symptoms of disseminated sclerosis—nystagmus, tremor of the hands and legs, and bladder difficulty—and yet with appropriate rest and other treatment that patient has recovered, and in the course of three or four years there has been no recurrence of the symptoms. So one may claim such a case as one of disseminated sclerosis which has recovered. An unfortunate thing in reference to the poison in those cases is, first of all, that we do not know what the poison is, we do not know what determines its elaboration, and we do not know any antidote for it. So, until these things are cleared up, we shall be, to a certain extent, helpless in the face of such a disease as disseminated sclerosis. Yet the recognition of the fact that a case of disseminated sclerosis does not necessarily go on to helplessness, but may recover, enables one with judgment and experience to give a much more favourable prognosis, and one which is more likely to be correct, than one is in the habit of considering likely.

There is another class of cases, in which there seems to be a gradual deterioration of structures, due to the slow but steady effect of some poison. In

tabes dorsalis, of course, we have a disease of this kind, and I do not know anything more suggestive in the way of analogy than that which Sir William Gowers formulated some years ago. He was speaking of tabes dorsalis and alcoholic peripheral neuritis, and he said that peripheral neuritis from alcohol we must look upon as a toxic disease, and that the ultimate source of the poison which caused that disease is the yeast plant; and that in tabes dorsalis we have to deal with a similar toxic disease; in this case, however, the central nervous system is at fault, and the ultimate poison in this case is almost certainly the microbe of syphilis. So that we have here two parallel instances of toxic disease; two different toxins, of course, but each toxin probably traceable ultimately to a now well-known but lowly organism, one resulting in the poisoning and degeneration of the peripheral nervous system, and the other attacking the central nervous system. But it is conceivable that in any given case the supply of such poison is limited, and cases are not uncommon in which we may say the condition is one of embryonic tabes dorsalis. We know that in many instances the Argyll-Robertson pupil is present, and nothing else. In a certain number of cases there may be lightning pains, loss of knee-jerks, and nothing else. In one case I know at the present time the patient has had Argyll-Robertson pupil 15 years without developing any other sign; and so with other cases of tabes, the poison seems to have spent itself, and no more seems to be elaborated. Its effect on the nervous system ceases, though a certain amount of damage has been done which is irremediable. And when the morbid process has ceased, by means of appropriate exercises applied to the various structures which remain, we may get considerable improvement in the condition of the patient. It is this view which justifies one in the treatment of tabes dorsalis by the exercises of Fraenkel, which I shall refer to presently. These are directed to the re-education of the comparatively uninjured structures.

I would next allude to diseases of the vascular system causing nervous symptoms. I have already referred to the case of hemiplegia, the result of a rupture of a vessel. When that occurs there is very frequently a tearing across of certain fibres of the nervous system and the destruction of their function. But the destructive effect of a hæmorrhage is usually comparatively small, and the area in which the fibres are completely destroyed is small compared with the area in which the function is interfered with. So in a case of cerebral hæmorrhage one usually finds, in the first instance, a condition of very profound paralysis on one side. I shall not refer to the coma, but to the motor paralysis. If that patient lives, one is justified in saying there will be a considerable degree of recovery, because the congestion and œdema around the area of destruction is very great—sufficient to interfere with the function of a large area of the nervous system. The same is true in a disease like infantile paralysis. Whatever the ultimate pathology of infantile paralysis—anterior poliomyelitis—may be, we know that part of the pathological process certainly is a blocking of blood-vessels and a destruction of cells. But we see almost constantly that the degree of paralysis in the

initial stage of the illness is infinitely greater than the ultimate amount of paralysis turns out to be; the patient may at first have both legs paralysed, and the ultimate paralysis may be restricted to one segment of one limb. I know of two boys simultaneously affected with the same kind of illness; they had head retraction and paralysis, and were extremely ill; one recovered perfectly, whereas the other was left with weakness of one leg. I do not doubt for a moment that the boy who completely recovered had anterior poliomyelitis, but in his case the condition cleared up without having effected any serious structural change in his nervous system. Such facts enable us to take a much more hopeful view of the future of such cases; I do not say of treatment, because the treatment of such cases is one of common sense and waiting. We have no drugs of any very great efficacy in those acute diseases.

From the point of view of treatment I wish now to refer to one or two diseases, and first of all, to tabes dorsalis. As you know, it is a disease characterised pathologically by degeneration of the posterior columns of the spinal cord. Clinically it is characterised by the presence of lightning pains, and, in the commonest variety, by what we call hypotonia with ataxy, and not infrequently by some degree of bladder trouble.

In the majority of cases the great difficulty which the patient experiences is in getting about; and Dr. Fraenkel, who was the first to recognise the very close connection between the hypotonia of muscles and the ataxy, devised a series of extremely simple exercises which certainly, if persisted in by the patient, enable him, in many cases, to reacquire the power of walking. The exercises, as illustrated here (various apparatus were shown and the manner of their use in treatment), are simply devised with the view of making the patient practise his co-ordination. The difficulty that the patient has is in moving about freely, unless he keeps his eyes constantly fixed on the ground. In practising these exercises he has to have his eyes directed to the ground, but he is able gradually to get strength in his muscles, so that he is able to get about. Usually he has great difficulty in getting his foot into the footprints, but if he practises very deliberately he is able to do so, though his first difficulty is to be able to balance himself properly on one foot. But give him all the help you can, and if he has extreme ataxy he will need a living support on either side. After he has practised walking more or less deliberately in this way, you can make him perform movements of a more elaborate character; for instance, while resting on one foot make him describe a semicircle before he puts the other foot down, and so also with the other. After he has practised these movements sufficiently, make him walk in the footprints very deliberately, balancing the foot for some time before putting it in the required place. It is almost incredible how much improvement can be effected in some cases by this simple means. The most striking case I have seen was that of a policeman with tabes, who came here some years ago. He had been totally unable to walk for several months, and he had to be carried into the hospital. But in six weeks he went out of the hospital able to walk perfectly well, simply

carrying a walking-stick. To bring about such a result both the patient and his nurse must be equally desirous of bringing about the improvement. Of course, in some cases the patient is so ataxic that he is unable to walk or stand at all. I had a patient brought in here about three months ago who was in that condition. He was extremely ataxic, added to the other ordinary symptoms of tabes, and he was so weak and ill that we did not dare to get him out of bed for a week or two after he came in. In such a case we have a device which is put on the bed and which enables the patient to get a certain degree of exercise of the muscles of his legs, and by means of which he can practise co-ordination. The patient is made to practise putting his heels, just over the tendo-achillis, in these slots, one after the other, raising up the foot very deliberately, and putting it into the one which he is told to. It is always well to combine with these exercises the use of massage, because these patients are nearly all badly nourished, and the muscles are considerably weakened, apart from the ataxy. The other apparatus I show you is similar in design, and here we get the patient to put his heel into one or other of these holes. With these before him, a patient, especially an ingenious patient, will devise various exercises, which tend to improve his co-ordination. I think those exercises are of the utmost use in tabes, and I am sure I have seen immense good effected by them, in restoring power which the patients thought they had lost for ever. And that leads me to recall what I spoke of a little while ago, that in some of those cases, apparently, after a certain amount of damage has been done to the nervous system, the poison, or whatever is effecting the changes in the nervous system, ceases to act or ceases to be secreted. I know of one man, an old soldier, who, ten years ago, was living in a bath-chair, but to-day he is acting as librarian in one of the garrison towns; so the fact that a man can improve, who had undoubted tabes of a severe character, is encouraging with reference to other cases.

Besides ordinary cases of ataxy with hypotonia and lightning pains, there are cases of tabes in which the chief symptoms are so-called gastric crises. It is curious that in the majority at least of those cases of gastric crises ataxy is conspicuous by its absence. A patient with gastric crises usually has, at first at least, only the gastric crises, often with loss of knee-jerks and Argyll-Robertson pupils. And the question arises, how are those to be treated? I think a patient with gastric crises has a very bad time indeed, because the vomiting is very severe, and the only thing which, in my experience, controls it is morphia. So a person with gastric crises runs a very great chance of becoming a habitual taker of morphia. I know one patient who passed through the stage of gastric crises without taking morphia, and it is important to recognise that those crises are but a phase of the disease. But to pass through them without taking morphia is a very rare experience. I know another man, who comes here occasionally still, who certainly acquired the morphia habit in a very severe form, and he has recovered from his gastric crises and also from the morphia habit, but he still has absent knee-jerks and Argyll-Robertson pupil. In some cases I have known other trophic changes

develop, such as perforating ulcer; and one patient who had a Charcot's joint, went through his phases without having morphia, and developed no other symptom of tabes; and he finally died, after some years, of Bright's disease.

With reference to the type of tabes in which laryngeal crises are a feature, these cases in my experience, are nearly always extremely ataxic. These laryngeal crises depend on the paralysis of the abductors of the vocal cords, and the occurrence of occasional spasm in the adductors. I have never seen a patient die in a laryngeal crisis, but I have seen many patients nearly die from this cause. Usually a patient with such spasm becomes cyanotic, and the spasm passes off. In cases of severity I should not hesitate to use morphia, because that seems to relax the spasm of muscles as quickly as anything I know.

Another point which has to be thought out with reference to the treatment of tabes is in regard to the trophic changes which occur, the so-called perforating ulcers. It is remarkable in what a large number of tabetics the perforating ulcer is caused by the injudicious paring of a corn. Always warn tabetics that they should be extremely careful about their feet, and particularly careful about cutting their nails or cutting corns. These perforating ulcers can often be cured. We used to be taught that when perforating ulcer once appeared it remained for ever. But I have known many cases in which perforating ulcer was cured simply by attention to cleanliness with boracic fomentations and similar treatment. Such a patient has to remain in bed, but the outlook is better than used to be taught.

With regard to the disorganisation of joints in some cases of tabes, associated with Charcot's name, that ought to be treated by support. Wherever there is a Charcot joint there is very great danger of real disaster through the bone perforating the skin. The heads of the bones become absorbed, and the shaft of the bone is sometimes left, and the fact that there is no pain makes the patient take liberties which he would not otherwise take.

There is one sad condition in tabes, namely, optic atrophy. In the vast majority of cases where this occurs, ataxy is conspicuously absent. That is illustrated by a case which I showed on Friday. With reference to treatment of optic atrophy, I am sorry to say that it is a very hopeless problem indeed, although I have known one or two cases in which the atrophy apparently ceased spontaneously. There again it seems as if the supply of poison had been exhausted; either it ceases to be effective, or it is no longer elaborated. At any rate, these patients were left with sufficient vision to enable them to get about. The measures we usually adopt are the hypodermic injection of strychnine, and in some cases it has been claimed that that has led to the cessation of the atrophy. But I am bound to say that, although I have seen cases apparently arrested after considerable damage has been done, I have never seen optic atrophy arrested at a very early stage from any such measure as that. One would also use electricity, either high frequency or galvanic, so as to stimulate the nerve, and get as much out of it as possible; but neither has that, in my experience, been a success.

With regard to disseminated sclerosis, I have already said something about that, but I would add that in many cases the first attack may be the last, and that the repeated attacks, which are so common in the disease, may not occur. And the question arises, what are we to do in such a case so as to favour recovery as much as possible? The routine treatment which I follow here in cases of this character is to put patients to bed, keep them there for three weeks, give them massage, with electrical treatment, so as to improve their nutrition, feed them up as much as possible; and at the end of three weeks I get them up a little, and then more and more as time goes on. In most of the cases this treatment is effective in strengthening them and enabling them to walk better, and apparently in arresting the effect of the attack through which they have just passed. It is particularly good in cases where you get the patient when the attack is still fresh. And you might make the period of rest longer if the attack was very severe. In such cases the tendency is for recovery to take place up to a certain point, but after each attack the patient is left more and more helpless. And what we would like to know is, what determines these attacks. Is it some poison? And if it is, what is the poison? And can we do anything to antagonise it?

There is no special treatment for the optic atrophy which you find in disseminated sclerosis, though it practically never, in that disease, proceeds to complete blindness. There is a patient here whose attack began with complete blindness in both eyes, but that being an inflammatory condition and the result of retro-bulbar neuritis, one expects some improvement, and already he is able to distinguish fingers in front of his eyes, and I anticipate in his case the recovery of a useful amount of vision. I have known patients blind in one eye from the condition. That is contrary to the state of affairs in tabes, because there it is the rule for almost complete blindness to occur.

I will say a few words, in conclusion, with regard to the treatment of epilepsy. Anyone who has much to do with nervous diseases is familiar with epilepsy, and it is a particularly interesting disease, because I do not know any disease in which you can see the effect of drugs so well as in epilepsy. In some cases of epilepsy, unfortunately, you see no effect from drugs; you give all the drugs in the pharmacopœia, more or less, and give various strengths of them, but there is no effect on the fits. These are extraordinary cases, and I always remember one little girl here who had every drug in the Pharmacopœia, and some which are extra-Pharmacopœial. Then we stopped all drugs and sent her to the Convalescent Home at Finchley, and from that day she had no other fit! But in the majority of cases of epilepsy we can do a great deal by means of drugs, and especially by giving attention to dosage, to the time of their administration, and to the combinations of bromides with other drugs. In the ordinary case of epilepsy in which fits occur at long intervals, of course it is often difficult to get a patient to consent to take drugs, but it is always well to start giving 15 or 20 grains of bromide twice or three times a day, and beg him to go on with it

for months. And if we find in such a case that the fits increase, we must increase the drugs, or the number of times they are administered in the 24 hours. In that way we have a better means of knowing the patient's co-efficient for the drug, and arriving quickly at the best dosage to suit the case. In cases where the fits occur only at night, one is content to give a fairly large dose of bromide at night. I nearly always give the sodium salt, but occasionally I give strontium, because strontium has a much less tendency to cause acne than has the sodium salt. But in nocturnal epilepsy, I am content to give 20 or even 40 grains of bromide every night, but nearly always combined with digitalis, because, although they are called nocturnal cases, these patients have fits during sleep, and I believe that the fits are occasioned by some change in the circulation which occurs during sleep, and I believe digitalis has a steadying effect on the circulation, and is a very useful adjuvant to bromide in such cases. I also always give bromide with *nux vomica*, because I am sure that nowadays we do not see, when cases are treated in this way, the depressing effects which used to be so common when bromide of potassium alone was given, and those substances do not interfere with the sedative effect of the bromide. Another drug which one frequently gives in combination is belladonna, and I am sure it is particularly good in children who have attacks of *petit mal*. I have seen cases in children in which bromide and belladonna have stopped attacks when bromide alone had been quite ineffective. Borax is also very useful in combination with bromide, especially in chronic epilepsy. The only drawback to borax is that it is apt to cause gastric disturbance. And—although I have only once seen that—it is apt to cause alopecia. That condition I saw a few weeks ago, in a patient who was taking ten grains three times a day, and he had marked alopecia suddenly developing on the back of his head.

In conclusion, I will only refer to the time of giving the bromide. The ordinary way is to give it three times a day, after each meal, and this is good where the fits are spread over the whole of the day, and when they take place also in the night four doses may be given, though it is often difficult to give the fourth dose. In nocturnal cases I give the medicine at night only. There is a class of case in which the patient has fits in the morning, often during dressing, and in many cases the fits occur only during that time; and in that case you may be certain your treatment will be effective if you give a dose at night, and ask the patient to take another dose half an hour before getting up. In some of those cases, if you stop the fits at one time, they, as it were, crop out at another, and you have to time your doses to deal with the new conditions. But epilepsy is a particularly interesting disease in that way, in that you can draw definite conclusions as to what drugs are doing and what they are not doing. And I think the more one sees of ordinary epilepsy the more one is encouraged to believe that treatment may be effective in controlling fits, or, at all events, so modifying their frequency and severity as to make the patients' condition a much more tolerable one.

MEDICINE.

SCLERODERMIA AND RAYNAUD'S DISEASE.

NEITHER sclerodermia nor Raynaud's disease is common, and therefore the fact that the two conditions have been observed together in the same individual again and again would seem to indicate that, dissimilar though they may appear to be at first sight, they have some essential common factor in their pathology. This raises several interesting questions, not the least of which is that deficient activity of the thyroid gland has been suggested as one such common factor, in which case the administration of thyroid extract in suitable doses, along with such local or other treatment as each individual case may seem to require, should be beneficial both in sclerodermia and in Raynaud's disease, whether these occur together or separately.

The following is a case in point:—A lady aged fifty-five sought advice for certain nervous and cutaneous troubles affecting both her body and her extremities. Beyond the fact that the father was a drunkard who died young, there seemed to be nothing of importance in the family history. The patient herself had had smallpox at four. At eleven she began to menstruate, and developed marked symptoms of a functional nervous nature at the time. With the appearance of the menses she was seized with an intense fear of the sight of blood; the same evening her mouth was twisted to the left side; liquids regurgitated through her nose, so that they could only be swallowed when the head was thrown right back; the voice became nasal and the patient could not articulate words. These symptoms persisted for two months, and then disappeared again as abruptly as they had developed.

She was married at nineteen, and she had an only daughter. The first husband died of acute phthisis; at thirty she married again, but had no family by her second husband, who also died of consumption.

The patient had always suffered more or less from gastric pains and discomfort, especially after meals; she had always been troubled with sleepiness also; but otherwise she had been fairly well, until at the age of thirty-two, having developed a rapid enlargement of her abdomen, she felt sure she was pregnant, and consulted a midwife and a physician. The diagnosis of pregnancy was at once changed for one of simple obesity with abdominal predominance. Almost immediately the patient became breathless easily, and declared that she could not mount stairs. Vaso-motor troubles became obvious. The face readily flushed; there was a sensation of intense internal heat, whilst any degree of either heat or cold externally became intolerable. The patient could only endure herself in the open air.

At thirty-nine she passed through a severe attack of typhoid fever lasting two months. To the nervous symptoms already detailed were now added some of a more mental character. Memory was affected, the patient became unduly sad, weeping for trivial causes; her ideas wandered, and she was bad at recollecting things. When she went out for walks she repeatedly lost herself in places with which she had formerly been quite familiar. At

about forty-five years of age she added to the above symptoms those of violent headaches, severe cramp-like pains in her limbs, and shooting pains in her joints. The hands and feet swelled; when it was cold the extremities became blue and painful; when it was hot the patient felt them to be burning. The skin became thicker, the fingers were bulkier and more difficult to move.

These symptoms persisted; at fifty the menopause occurred. At fifty-five her condition was a combination of typical sclerodermia with Raynaud's disease, possibly with myxœdema also. A stout, short woman, she was able to walk only slowly and with difficulty. Her face was red, swollen-looking, and yet fixed and immobile, like that of a wax model or a mask; the cause of this fixity was the sclerosis of the subcutaneous tissues and skin. The mouth, when closed, was little more than a slit between the pinched lips, and it could only be opened very slightly to allow of the introduction of food. The hands were cold and of a dull red colour; the least coldness of the atmosphere brought out the typical second degree of Raynaud's disease in them. The fingers were stiff and cylindrical, hard to the touch, stiffened by cutaneous and subcutaneous sclerosis, and scarcely to be moved at all, either actively or passively. The sclerodermia was less marked in the forearm, though there were areas of it both here and on the legs and on the trunk.

All the fingers felt as if they were made of some firm, resistant, homogeneous substance. The skin could no longer be made to slide or move over the subjacent structures. The fingers themselves were cold, and there was a noticeable difference between their temperature and that of the rest of the hand. The line of demarcation between the cold and the warm zones was clearly defined, about the middle of both the back and the palm of each hand, but the regions liable to syncope and asphyxia did not coincide with those affected by sclerodermia. The syncopal areas came only to the middle of the hand, whilst the sclerodermia extended to the wrist.

The toes and feet were affected in a similar way to the fingers and hands, but to a less degree. The heart, lungs, kidneys, and digestive organs presented no obvious abnormality. The nervous system exhibited none of the ordinary signs of organic disease. The region of the thyroid gland felt quite empty. The palpating fingers came directly down upon the larynx and trachea without being able to feel either lateral lobe. It is true that, in the case in question, the administration of thyroid gland extract did not bring about any great diminution in the sclerodermia. This, however, does not prove that it would not prevent, or at least lessen, the rate of spread of the disease; and in future cases it is to be hoped that the earlier recognition of the nature of the lesions and the more prompt use of thyroid extract may prevent patients from advancing nearly so far in the wrong direction as was the case above.

SECONDARY SYPHILITIC NEPHRITIS.

It is unfortunate that so much stress is usually laid upon the occurrence of œdema in acute nephritis that most medical students and many medical men find it difficult to believe that acute nephritis can be present unless there is puffiness of the eyelids, swelling of the ankles, or other evidence of œdema. It is well enough proved, however, that a virulent and fatal acute nephritis may run its entire course without any œdema at all. The fact has been confirmed by autopsy repeatedly, after scarlet fever for example. If the urine were not tested systematically in these cases, the occurrence of acute nephritis might be entirely missed. It is so missed every day simply because urines are not tested regularly during every fever. Hence it is that many a case of chronic nephritis arises without assignable cause when really it is the natural and direct outcome of an acute nephritis that passed unrecognised years before.

Nor is it only after scarlet fever that this non-œdematous form of acute nephritis occurs. It is by no means uncommon in connection with pneumococcal diseases, especially lobar pneumonia complicated with empyema. It is also to be seen in cases of secondary syphilis. The albuminuria of secondary syphilis is sometimes regarded merely as a symptomatic albuminuria, chiefly on account of the absence of general œdema; but frequently, if the urine is examined microscopically, plenty of renal epithelial cells and tube-casts indicative of actual nephritis will be found. It sometimes happens there is general œdema as well, so that the nephritic nature of the albuminuria becomes obvious to all. That the nephritis in such a case is actually syphilitic has been proved by the recovery of the *Treponema pallidum* of Schaudinn from the urine. This has been observed by Dreyer, Toepel, Hirsch-

berg, MacLennan, Barth, and Michaux. The following is a case in point:—

A young woman of twenty-eight came under observation two months after contracting syphilis. She was covered with an abundant and typical roseola, together with buccal and vulval mucous plaques. She also exhibited a generalised anasarca that had developed suddenly the day before in her face, and had thence spread in four and twenty hours all over her body and limbs. The heart was natural; there was no ascites and no pleural effusion. The urine was very scanty—less than five ounces in the twenty-four hours. It was high-coloured, and contained fifteen parts of albumin per thousand, together with a few red blood corpuscles and many fatty and granular tube-casts. Some of the deposit was specially stained, and after some search typical examples of the *Treponema pallidum* were found, and their nature was confirmed by a skilled bacteriologist. No other bacteria were seen.

The patient was at once placed on the intensive treatment of daily intra-muscular injections of benzoate of mercury—two centigrams a day. The diet was strictly limited to milk, and absolute rest in bed was enjoined. At the end of two days the anasarca was getting less and the quantity of urine passed was increasing. In ten days' time the œdema had entirely gone, and the albuminuria ceased a few days after that. The intra-muscular injections were changed for oral administration after the twelfth.

It is interesting to note that whatever may be the case when non-syphilitic nephritis occurs in a syphilitic subject, in the above case, in which the nephritis itself was syphilitic, mercurial treatment was well borne.

THE AFTER-EFFECTS OF CEREBRO-SPINAL MENINGITIS.

Of the four chief forms of acute meningitis—suppurative, basal, posterior basal, and epidemic cerebro-spinal—the last two are probably identical in kind, though they may differ from one another somewhat in type. They have an altogether different prognosis from the other two, for whereas all cases of suppurative, and almost all of basal or tuberculous meningitis prove fatal, about one-third or more of the cases due to the meningo-coccus recover. Out of eighty-two cases recently collected by Cohn, fifty died in hospital, two died after leaving hospital, three were lost sight of, and twenty-seven recovered and were traced for some while afterwards. The latter could be subdivided, according to their severity, into eight mild, fifteen medium, and four severe cases.

Recovery in the mild cases was complete, nothing whatever remaining to distinguish these children from others who had not been ill at all.

Some of the cases of medium severity recovered completely, either without or with a period of delay. In a fair proportion, however, there were permanent after-effects of one sort or another. Out of the fifteen cases in this group many complained of headache afterwards, either on exertion or upon

trying to read or write, or on stooping; in three patients there was obvious loss of memory, and in two much difficulty in concentrating attention; in three others there was sufficient weakness of the arms or legs or both to make any serious exercises impossible. It was difficult to say whether this paresis would be quite permanent, however, for in at least two other cases there had been marked paralysis of the extremities and of ocular muscles on discharge from hospital, and yet these had recovered entirely later on.

Of the severe cases that recovered, two did so completely—a very encouraging fact. The remaining two remained deaf and had facial palsy, one also suffering from paresis of one arm for a long time, though the limb ultimately got well. The wonderful way in which all the exuded serum and lymph in the meninges may be reabsorbed was shown by the post-mortem examination in one of the severe cases that died of diphtheria and heart failure a year after recovery from cerebro-spinal meningitis. The only changes to be found within the cranium were some adhesions between the pia-arachnoid and the bone at the level of the anterior fontanelle.

SURGERY.

THE BEHAVIOUR OF SEQUESTRA.

THE life history of a sequestrum from the time of its formation to that of its ultimate absorption or its removal by the surgeon varies according to a number of factors. The chief of these are the nature of the infective process originally responsible for the disease and the locality which is affected. A sequestrum is essentially a portion of dead bone remaining in the body.

Large sequestra are usually the result of acute inflammation in a long bone, in which, as in osteomyelitis, a greater or lesser portion of the shaft undergoes necrosis. The bone dies in cases of osteomyelitis, because it is deprived of its blood supply by a double action; the virulence of the infection causes thrombosis of the branches of its nutrient artery and the superficial blood supply is interfered with by the stripping-off of its periosteum. The whole shaft may form one solid sequestrum, or if the infection is very acute it may be broken up into small pieces by pathological processes and discharged through an external wound if there be one. The details of the following case, which is an example of this, were supplied to the writer by the medical officer of a big-game shooting expedition. The patient, one of the baggage-porters, was an African negro, aged 38. He was stabbed during a fight in the greater tuberosity of the right humerus with a septic instrument. The wound suppurated and discharged pus without intermission. On the tenth day small fragments of dead bone were seen in the discharge. After the first few days, except for occasional pyrexia, his general health did not appear to be affected. The small sequestra continued to come away, and it was not until several weeks after the date of the infliction of the injury that the expedition returned to its base. There was a small x-ray apparatus in the town, and a skiagram was taken. It was then seen that the upper three-quarters of the shaft of the humerus were gone, and the periosteum was much thickened; but that it did not yet form a definite bony involucrum was shown by the fact that the upper arm was not rigid. It was obvious that the shaft had been gradually extruded in the form of minute sequestra. The after-history was interesting. In two months the discharge ceased and a complete new shaft was gradually formed from the periosteum, giving the patient a useful arm with no obvious deformity, except that on careful palpation the surface of the bone could be felt to be slightly irregular in outline. Such a good result is rarely obtained in this country.

Acute inflammation in bone may also produce a small sequestrum, if it is confined to the superficial aspect as in a localised suppurative periostitis. The death of the bone is due in this case to the stripping-up of the periosteum only, since the superficial parts of a long bone depend for their nutrition almost entirely on the periosteal blood supply.

The first effect of the presence of a sequestrum is to produce an osteo-blastic reaction in the overlying periosteum; and thus a protecting layer of new bone

is formed, circular in the case of a central sequestrum, flat in that of a laminar. As soon as the involucrum is formed, the sequestrum acts as an irritant and a perforation appears in the involucrum, which sooner or later makes its way to the surface. Occasionally a very small sequestrum is absorbed completely without the formation of a cloaca, but this is the exception. The cloaca is Nature's method of getting rid of the dead bone.

Much may be done by surgical intervention. But it is highly important to remember that no good can be done by operating before the sequestrum is separated. In deciding this a skiagram affords the greatest possible help by displaying the outlines of the sequestrum. Occasionally, however, one is misled even by a good skiagram. This happened to the writer recently. The patient, a boy aged 13, had suffered from osteomyelitis of the left femur. He had, when seen, an involucrum extending from the condyles to the lesser trochanter and a small cloaca on the outer side of the leg at the junction of the lower and middle thirds. A skiagram was taken and a large sequestrum was seen, which appeared to be quite loose. A long incision was made on the outer side of the limb and a large groove chiselled in the involucrum. An attempt was made to remove the sequestrum, but this was found to be impossible, because it was still fixed at its upper end. The wound was accordingly closed. Six weeks later another skiagram was taken, and, on the evidence given by this, a second operation was performed. The sequestrum was then successfully removed, without fracturing the involucrum, which was firm and bony. In removing the sequestrum from the humerus or femur, it is well to wait until the involucrum is firm; otherwise the limb may telescope from want of support. Many plans have been devised to overcome this—e.g. the introduction of animals' bones or celluloid or ivory rods, but the simplest and most effective is to apply an extension to the limb until such time as the new bone is strong enough to resist the contraction of the muscles. This difficulty does not arise in the leg or forearm, where the second bone acts as a most efficient splint.

Tuberculous disease of bone also causes the formation of sequestra. But the infection being subacute and the process one of caries, in which the bone is gradually replaced by granulation tissue, rather than necrosis, in which it undergoes sudden death owing to lack of nutrition, the sequestra produced are usually small and broken up *ab initio*. Moreover, they tend to make their way to the surface and discharge themselves without the formation of an involucrum. Occasionally, when a central focus of tuberculosis occurs in a long bone, some compensatory osteosclerosis may take place at the periphery; but this is not in the true sense of the word an involucrum. Syphilitic disease of the skull causes sequestrum formation of a characteristic type, the sequestra being circular or irregular in outline and tabular in form.

A CASE OF SUBPHRENIC ABSCESS WITH INTERESTING FEATURES.

A SUBDIAPHRAGMATIC abscess is nearly always a symptom in the course of some other disease more or less remote; and, further than this, the infection is usually brought about by direct extension from a pre-existing focus in another viscus. Instances may be multiplied to prove this point. Reference to a few is, however, ample. An empyema, for instance, by extension downwards, or an appendicular or perirenal abscess by extension upwards, may equally infect the peritoneum on the under surface of the diaphragm; or, of course, an abscess may follow on the leaking of a gastric ulcer on the posterior wall of the stomach. But cases in which no such direct track can be found are comparatively rare, and it is mainly for this reason that the clinical history of the following case is interesting.

The patient, a man aged twenty-four, was first seen on June 30 of this year, complaining of pain in the right side of the chest and shortness of breath. A fortnight previously he had begun "to feel queer." He was treated for gastritis. A week before he had developed a dull aching pain in the left hip, which was worse if he stood up for any length of time. This had been regarded as rheumatic. At 5 P.M. on the day before he was first seen he had a rigor, and since then the shortness of breath and the pain on the right side referred to the region of the nipple had come on. He had had scarlet fever at the age of eleven, but no other illnesses. Syphilis was denied.

When seen the patient was flushed, and the *alae nasi* were working, though he had not much apparent dyspnoea. The skin was dry and hot to the touch, and he had a dry cough and occasionally brought up some sputum, which was rather nummular in appearance. The clinical picture was, in fact, a typical one of lobar pneumonia, and the physical signs found in the right side of the thorax corroborated this hypothesis, the lower lobe of the right lung being consolidated. The temperature fell by lysis in five days, but never came down to normal, but a few days later (July 10) it rose again to 102° F., and remained about that level. The physical signs in the lung were unchanged; but as it was difficult to say whether the dulness found was due to solid lung or effusion, an exploring needle was put into the pleura, first in the sixth space in the posterior axillary line, and next in the seventh space in the line of the angle of the scapula. In neither case was fluid found. The temperature remained irregularly high, suggesting a focus of pus locked up somewhere. Further explorations were made from time to time, but without success until July 21, when a needle was inserted in the eighth space in the posterior axillary line and half an ounce of thick greenish pus, which did not smell offensive, was withdrawn. That afternoon a portion of the eighth rib was excised and the pleura opened. The lung appeared to be fully expanded, and no pus was found in the pleura. After this he continued much the same, with occasional fluctuations, but persistent pyrexia and dulness at the right base. He was again aspirated on August 16 in the eighth space, above the wound of

the operation, and more pus, similar to the last, was withdrawn. The wound was therefore opened up, and a further portion removed from the posterior end of the eighth rib. The cavity was explored, and on breaking down what appeared to be a firm adhesion at the base a large quantity of curdy, greenish pus was at once evacuated. A large empyema tube was put into the cavity and the wound was partially sewn up. The pus was examined bacteriologically; it contained pneumococci in great numbers, but these were apparently all dead, attempts to cultivate them failing altogether.

The patient was immensely improved by the operation; his temperature fell at once to normal, and the dulness at the right base diminished. He continued well for about a week until August 28, when his temperature suddenly rose during the night to 104.2° F. and he had a rigor. Next morning it was found that the character of the pus which came away through the tube was entirely changed. It was now thin and dark brown and had the peculiar odour associated with the bacillus coli. He also had hæmaturia.

The next day, August 29, he had another rigor. He now complained of pain in the abdomen, particularly on the right side, and on examination it was found that the abdomen did not move well and was rigid and tender in both flanks, more so in the right. A third operation was therefore performed, and the abdomen was opened by an incision parallel to and below the right twelfth rib. Immediately on opening the peritoneum which was thickened thin foul brown pus was discharged. No definite abscess cavity was found and there was diffuse peritonitis. Two tubes were inserted and the wound was partially closed. The patient vomited incessantly after the operation and died on the following day.

The autopsy revealed the following facts. The right lung was in a state of consolidation. The pleura was adherent to it all round. There was a hole in the diaphragm opposite the place where the rib had been resected. Underneath the right half of the diaphragm there was a large abscess cavity; and there was also diffuse peritonitis.

It must be presumed that, in this case, the subphrenic peritoneum was infected by the pneumococcus, without the intervention of an empyema, by means of the lymphatics. On the occasions on which pus was withdrawn by the exploring syringe, the needle must have gone through the diaphragm, which was pressed up by the abscess so that it lay almost parallel to the chest wall. Similarly when it was supposed at the second operation that a firm adhesion of the pleura was being broken down, it was in reality the diseased and softened diaphragm which was perforated with the finger. And, lastly, the final rise of temperature, coinciding with the change in the character of the pus, must have been caused by the bursting of the abscess into the general peritoneal cavity with consequent peritonitis, though it is still difficult to explain the almost immediate presence of the bacillus coli in the discharge.

GYNÆCOLOGY.

NOTES ON DYSPAREUNIA.

DYSPAREUNIA leads not only to great physical pain in many instances, but also to great mental suffering, often ending in serious neurasthenia. Its causes are not always apparent, and require very careful examinations and a thorough scrutiny of the history of the case for their diagnosis and differentiation. The cases naturally fall under two headings, according to the presence or absence of a definite local lesion, and the prognosis in any particular case often depends upon this. It is much easier to cure those patients who have a definite painful lesion than those in whom no lesion can be demonstrated; in fact, the latter may be incurable. The former class of case is nearly always dependent upon an acquired lesion. Where no lesion can be found the history usually is that coitus has been painful from the first. Further, the pain is commonly described as getting worse as time goes on in the cases which have a lesion, whereas it remains always about the same in those without lesions. To make a diagnosis in a given case a complete examination of the genital organs must be made, commencing with abdominal palpation, going on to inspection of the external genitals, and ending with a bimanual examination of the uterus and adnexa, and a visual examination of the vagina and cervix uteri with the speculum. Further, it must be remembered that the lesion may be in the anus or rectum, and that very occasionally the urethra and bladder are at fault. Therefore it follows that these organs must be examined in any otherwise obscure case.

The commonest cause is undoubtedly inflammation of the carunculæ myrtiformes combined with a chronic vulvitis. This in many instances is gonorrhœal in origin, but although it is of interest to know this, it does not modify the prognosis or treatment to any appreciable extent. It is sufficient to realise that the lesion is one due to infection of the hymeneal remains and surrounding vulval tissues. The carunculæ look a brilliant red, and may show small ulcerated areas, whilst the surrounding tissues are infected and bathed with semi-purulent discharge. The orifices of Bartholin's glands are often swollen and prominent, a condition which is almost always present in gonorrhœal cases. The gland itself may be swollen and painful, and cystic dilatation of the duct and parts of the gland may be met with. The whole picture is one of a local chronic infection. The pain in such cases is limited to the vaginal entrance, and is most acute when any attempt at examination is made. As a rule, this represents the whole of the lesion, and no tenderness of the tubes or ovaries is found—the lesion is strictly local.

The next common cause is much more deep-seated, and lies in tender prolapsed ovaries, very often in connection with a retroflexed and retroverted uterus. Two kinds of cases present themselves, those in which the displaced uterus and ovaries are movable, replaceable, and without adhesions or inflammation, and those in which a real salpingo-oophoritis is present, with fixation of the

uterus, tubes, and ovaries to the surrounding parts. The former cases are almost always set up by a previous labour or abortion (the only common causes of retroflexion and retroversion), with subsequent interference with the blood supply of the ovaries, followed by congestion and œdema and elongation of the ovarian ligament. The latter are usually the result of an infection of the tubes *via* the uterine mucous membrane, the organisms being either the gonococcus unconnected with pregnancy, or other organisms usually spreading after a septic puerperium. The cases with adhesions are the worst of all, the inflamed ovaries and tubes, bound down close to the posterior vaginal fornix, being acutely tender and intolerant of the slightest touch.

Other causes of dyspareunia occasionally met with include smallness of the vaginal orifice, urethral caruncle, fissure of the anus, thrombosed and ulcerated hæmorrhoids, urethritis, and cystitis.

When the vaginal orifice is very small and the hymen has sharp, tough edges, coitus may be impossible, and repeated attempts always give rise to pain. In these cases the mucous membrane may not be tender to a gentle touch, and, as a rule, there is no inflammation. Urethral caruncles are evident on inspecting the vulva, and may be most acutely tender to the touch. Fissure of the anus is easily discovered by examining the anus visually whilst the patient is asked to bear down. It may give rise to agonising pain on defæcation or on any disturbance of the pelvic floor such as would occur on an attempt at coitus. Thrombosed and ulcerated piles are nearly always external or can easily be made to protrude. These, of course, do not as a rule last very long, as they tend to cure themselves, but whilst they last may be acutely tender and cause dyspareunia. Urethritis and cystitis cause dyspareunia because the tender urethral and bladder walls evoke painful sensations upon movement of any of the pelvic organs.

Whilst all these lesions cause pain it must not be forgotten that they may also cause spasm of the pelvic floor muscles leading to closure of the vagina, and the condition known as vaginismus may depend upon any of these painful local lesions. Vaginismus, however, may occur without any demonstrable local lesion, in which case the spasm prevents coitus and attempts may become painful.

Treatment is fortunately eminently successful when local lesions can be demonstrated. Inflamed carunculæ are best treated by complete excision of the hymeneal ring, with careful suture, so as to obtain primary union. Painful prolapsed ovaries usually call for operative treatment, for pessaries cannot as a rule be worn, and often fail to correct the displacements. When a salpingo-oophoritis is present operations must be done, and other local lesions call for their appropriate treatment. Where no local lesion exists and the vaginal entrance is wide dyspareunia seems practically incurable.

PUBLIC HEALTH AND HYGIENE.

THE HYGIENE OF CHILDREN'S HAIR.

THE School Medical Officer of the Willesden Local Education Authority recently issued a circular letter to the parents of children attending public elementary schools which appears to have excited a good deal of comment, and, it is said, not a little indignation. The circular letter reads as follows:—

DEAR SIR OR MADAM,—As a result of the medical inspection of school-children, it has been discovered that a very large number of the children are sent to school in a verminous condition. To those careful and scrupulous parents who keep their children clean and free from this disgraceful state this must be a source of great annoyance and constant trouble, since their own children are thus necessarily exposed in school to verminous contamination.

An effort is now being made to free our public elementary schools from these pests, and I am making this appeal to all parents sending their children to such schools to assist me in the endeavour to protect their children from becoming verminous. Many parents desirous of keeping their children's heads clean find it almost impossible to do so in the case of girls, on account of the fact that they wear long hair. There is no need for young girls to wear their hair long. The hair would ultimately grow stronger if it were kept close-cut until the child was 10 or 12 years of age. If the cleanly parents will set the example of letting their girls wear short hair while at school much more hygienic conditions will be established in our public schools, and the prevention of vermin, ringworm, and other parasitic conditions of the head greatly facilitated. On the eve of the holidays I venture to make this appeal to parents to send all children to school with short hair.

There should at least be no objection to doing this in the case of the younger children attending the infants' departments, and there can be no doubt if this is done that long hair in schoolgirls will come to be recognised as the badge of uncleanness.

But the sensible people who recognise the claims of hygiene must set the example to those parents who are insensible of the shame which should be felt at the evidence of parental neglect presented in the verminous and dirty state of a child's head.

Yours faithfully,
WILLIAM BUTLER, School Medical Officer.

The *Daily News*, commenting upon the circular, considers that its issue displays on the part of the school medical officer concerned, "a remarkable lack of tact," and "sympathises with the mothers of Willesden in their determination to disregard the suggestion of the medical officer."

We venture on our part to extend our sympathy to a medical officer who in his efforts to raise the hygienic standard of the schools for which he is responsible, has to encounter not only the prejudices of parents, clean and unclean, and the direct antagonism of the great unwashed, but the abuse also of certain organs of the daily Press.

It is so frequently the duty of public servants to say and do the unpalatable things which are necessary for the common good that to charge them with "remarkable lack of tact" when they deliberately undertake an unpopular course is unworthy of a journal which claims to voice the spirit of reform.

And where does the *Daily News* go for its facts,

or does it trouble about such important matters at all when it refers to the objectionable state of things which inspired the circular as "existing doubtless in but a few cases"? The sooner it is recognised that our public elementary schools are in a disgracefully verminous condition, the better it will be for that large section of the public which prefers the pseudo-aesthetic satisfaction of long hair to a sound hygienic taste in clean heads.

We probably underestimate when we say that more than half the girls attending schools maintained out of the rates and taxes are verminous. It is true that boys are not free from the affliction, but the fact has been established that they do not suffer to anything like the same extent as girls, and the reason lies in the fashion which dictates that boys shall wear their hair short. Those who have had most experience in dealing with the verminous condition of school children's hair are satisfied that only by a change in this fashion can a radical and permanent improvement be effected. Many working-class mothers have not time to give to long hair the attention it requires if it is to be kept clean, and once nits have been deposited on the hair, the prolonged exclusion from school necessary, if only vermin free children are to be admitted, encroaches most seriously upon the school-time of the child. In many schools if the system of rigid exclusion of verminous children were religiously carried out, the girls' departments would have repeatedly to be entirely closed. The plain facts are that thousands of cleanly parents, highly sensitive to the disgrace which properly is felt in harbouring vermin, are compelled to send their children to schools which are infested with pediculi.

It is no longer possible to close our eyes to the fact that our public elementary schools are in this respect a disgrace to those responsible for its continuance. If a remedy is to be found in the uniform practice among children of wearing short hair, the price does not seem exorbitant, and parents seriously desirous of the hygienic welfare of their children will do well to adopt a practice which, as the School Medical Officer of Willesden clearly sees, will in time cause the present vogue to be looked upon as "the badge of uncleanness."

We are pleased to be in a position to affirm that, notwithstanding statements to the contrary in the daily press, the issue of the circular has effected a material improvement in the condition of Willesden scholars. Many parents, we understand, have acted upon the advice tendered by the Medical Officer, while the parents of children who have been persistently verminous have had less compunction in resorting to a form of treatment deprived of the stigma attaching to a measure ostensibly designed not to prevent but to remedy the condition. It is a curious feature in the social life of our time and a main difficulty in the attainment of the hygienic life that people who do not object to being in fact verminous in person and dirty in their habits or environment are yet most sensitive to the imputation that they are so.

MEDICO-LEGAL POINTS.

MEDICAL MEN AND THE WORKMEN'S COMPENSATION ACT.

FROM a study of numerous compensation cases which have recently been heard by County Court judges and in the Court of Appeal, the function of the medical man is daily becoming more and more important. This is largely due to the changes in the law which were made by the Workmen's Compensation Act of 1906. Employers are now liable if their workmen become affected by certain industrial diseases. Claims are made in respect of other diseases alleged to have been brought on or accelerated by "accident." Workmen may be compelled in certain cases, to undergo operations or courses of treatment. Lastly, it may sometimes devolve upon a medical man to decide whether an accident has caused a workman "serious and permanent injury." In all these instances the medical evidence is of supreme importance to the administration of justice.

It is proposed in the present article to draw attention to certain recent cases in the County Courts and elsewhere, a record of which may be useful to practitioners who are from time to time consulted with reference to contested cases. It will be convenient to divide the subject as follows: (1) The meaning of an accident; (2) Diseases and diseases following accidents; (3) Compulsory operations; (4) Meaning of serious and permanent injury.

THE MEANING OF AN "ACCIDENT."

(a) *Senile Dementia*: It is well known to all medical men who have to do with the Act that the injury to the workman must have been caused by accident arising out of and in the course of the employment. In a case heard at Derby, an engine-driver injured his head and eye by a fall into a pit. This laid him up for six weeks, and he then returned to work. Five years later he was discharged on account of senile dementia. It was sought to connect this condition with the accident, but the County Court judge refused to allow the claim.

(b) *Death under Chloroform*: In a case heard in the Court of Appeal on March 26, the applicant had had his hand injured. An operation was performed to avoid the necessity of amputating the hand. A second operation became necessary to prevent contraction. During this operation the man succumbed to the anæsthetic, and his widow claimed compensation for his death. The County Court judge refused the claim on the ground that death was not caused by the accident; but the Court of Appeal allowed the claim on the ground that the operation was part of the treatment reasonably undergone for the purpose of curing the man.

(c) *Rupture of a Blood-vessel*: In a case heard at Sheffield, it appeared that a miner, aged 60, suffered dislocation of the shoulder by an accident, which occurred in May 1905. He went to hospital for six weeks, and was then discharged. On September 13, 1908, he died from rupture of a blood-vessel. A medical man, called on behalf of the applicant, who was the widow of the deceased, said that when he saw the applicant just before his death the

shoulder was still dislocated, and that the violent movement of the arm sufficient to cause dislocation might cause rupture. A number of other medical witnesses having stated that the death had nothing to do with the accident, the claim was dismissed.

(d) *Squinting*: A case which was heard at Wigan illustrates the fact that in order to found a claim for compensation, it must be shown that the accident causes incapacity. In the case in question an injury received by a miner caused him to suffer from a squint. It was alleged that by setting up double vision, this rendered it dangerous for him to follow his calling in the mine. The doctor called on behalf of the applicant, however, admitted that the effect of the accident had not been to diminish the man's working capacity. It was also proved to the satisfaction of the judge that plenty of men with one eye did work in coal mines without any dreadful consequences. Upon these facts the claim was dismissed.

DISEASES AND DISEASE FOLLOWING ACCIDENTS.

In several cases attempts have been made to render employers liable for diseases which followed upon accidents. In some cases the applicants have succeeded; in others the claims have been dismissed. The decision has always been a matter of medical evidence, and in one case at least the judge has placed absolute reliance on the decision of the medical referee.

(a) *Cancer*: In a case heard at Newport, a collier sustained a rupture when at work. Five months later he died of cancer. Evidence for the widow tended to show that the cancer was the result of the accident, but for the defence several doctors said the cancer must have been in existence for many months previous to the accident. The judge found for the respondents.

(b) *Consumption*: In a case heard at Doncaster, a miner was injured by a blow in the ribs. He was treated for some time. He died of tuberculosis five months after the accident. A medical witness called on behalf of the widow said that there was no trace of consumption four months before the accident. Another doctor expressed the opinion that there had been some latent tubercle present which was stirred up by the accident. A doctor called on behalf of the employers admitted that if a man was perfectly healthy before the accident and died afterwards, he would attribute his death to the accident. Upon these facts the claim was allowed. With this decision we may contrast a case which was decided at Durham. There a lad was injured by a strain in the course of his work on January 31, 1908. He received compensation until the middle of August, and died of consumption in September. It was shown that he developed this complaint some two months after the accident. Upon the medical evidence, however, the judge came to the conclusion that the strain had not caused or accelerated the disease. The employers were therefore excused from liability.

(c) *Gas Poisoning*: In a case heard at Droitwich,

a claim was made by a woman whose husband was alleged to have been killed by coal-gas poisoning. On November 6, 1908, he was overcome by a rush of gas when tapping a pipe. On the 16th of the same month he complained of giddiness and headache, a sensation of "pins and needles" in his left hand, and that things appeared to be double. There also appeared to be partial paralysis of the muscles of the mouth, and the pupils of his eyes were unequal. He subsequently died. At the trial evidence was tendered to show that the above symptoms were compatible with gas poisoning. The County Court judge held that even if it had been proved that death was due to gas poisoning he could not hold the employers liable, as this was not an industrial disease.

(d) *Hemiplegia*: In a case heard at the Ormskirk County Court, the applicant claimed compensation for total incapacity. He had already suffered an accident in which he lost one eye, and in respect of which he received 2s. 6d. a week compensation. It appears that in November last he caught his right knee against the iron bolt of a wagon. Two days later he had an apoplectic seizure from which he was still suffering. According to the medical officer for Wigan, who gave evidence for the applicant, he was suffering from hemiplegia, attributable to the accident; but two other doctors said it was impossible for this condition to have arisen from the accident. The County Court judge awarded four weeks' compensation at 10s. 6d. per week.

(e) *Loss of Sensation*: In a case heard at Cardiff, a miner who had met with an accident suffered from complete loss of sensation in one leg. In spite of this the County Court judge held that he was in a fit condition to do ordinary work, and refused to make any award. The medical evidence, however, was to the effect that the applicant's mental condition was such that he could not make the effort to carry out his work. The Court of Appeal held that an award should have been made. The Master of the Rolls said: "It is a fallacy to say that a man loses his right to compensation when the muscular mischief is ended and the nervous, mental and hysterical remains."

(f) *Miner's Nystagmus*: In a case heard at Durham it was alleged that the applicant had contracted "miner's nystagmus," which is a recognised industrial disease. The County Court judge referred the matter to Sir Thomas Oliver, as medical referee, who reported that he found no trace of nystagmus. Upon this the learned judge said that, although the man was undoubtedly suffering from something, he must find a verdict for the employers.

(g) *Ringworm*: Although it is true that compensation is only paid for recognised industrial diseases, nevertheless, if it can be shown that an ordinary disease was contracted by an accident, the employer may be made liable. The most recent illustration of this is afforded by a case at St. Helens, where a claim was preferred by a youth suffering from ringworm. It was proved that the lad had been sent by his employer, a blacksmith, to attend a horse suffering from this complaint. Upon the medical evidence the County Court judge was satisfied that

the applicant had caught the disease from the horse, and he was therefore awarded compensation.

COMPULSORY OPERATIONS.

In many recent cases applicants for compensation have been ordered either to undergo some operation or to submit to treatment. It is not necessary to refer to the authorities which have laid it down that a County Court judge may refuse compensation if workmen are unreasonable in this regard. There is one point, however, which should be borne in mind. It is that if the medical practitioner who is attending the workman is of opinion that an operation would be dangerous, this will be quite sufficient to justify the refusal. In a recent case, where a number of medical men called by the employers were of opinion that the operation was safe, the Court of Appeal held that the workman was justified in refusing, because of the advice of his own medical man. The Master of the Rolls pointed out that a man could not be unreasonable in following the advice of his own doctor.

THE MEANING OF SERIOUS AND PERMANENT INJURY.

A question of great importance to medical practitioners arises where the accident which has caused the injury is due to the "serious and wilful misconduct" of the workman. In such cases the employer is only liable if the accident has caused "serious and permanent injury." The existence of this condition must be decided according to the medical evidence. In a recent case at the Stoke County Court, Judge Ruegg was compelled to find that an accident had been caused by the serious and wilful misconduct of the applicant in breaking one of the colliery rules. The question then arose, "Was the injury serious and permanent?" Owing to a conflict of medical testimony, his Honour left this question to a medical referee, who, after careful examination of the workman, answered it in the affirmative. In these circumstances he was bound to make an award in favour of the applicant. As to the meaning of the phrase, his Honour said: "By serious and permanent I do not understand the Act of Parliament to mean that it must necessarily be a lifelong injury, but the injury was such that the effects would not be temporary, and was therefore correctly described as permanent."

PRACTICAL NOTES.

Beverages, etc., in Gout.

TEA, cocoa, and coffee, properly prepared, are quite harmless; the greatest consumers of these know nothing of gout. Strong black coffee taken habitually after meals is not advisable. Sugar taken in moderation I regard as not only harmless, but beneficial. Many gouty persons are best without wine. But many others are the better for the use of a little good wine, taken with one meal in the day. The quantity must be well below what is commonly regarded (by men) as moderate. So-called moderate drinkers of wine, as a rule, drink far too much.—*Sir Dyce Duckworth.*

THE ROYAL ARMY MEDICAL CORPS SECTION.

CLEARING HOSPITALS FOR THE TERRITORIAL MEDICAL SERVICE.

Of the different duties that fall to the Royal Army Medical Corps that of the collection of the sick and wounded of the fighting force and their removal from the area of active operations is one of the most important as well as one of the greatest difficulty. Should an invasion of these islands take place and fighting ensue, it would be the removal of these casualties that would be the main function of the Territorial Medical Corps, and it is important to draw attention to a gap that exists in the territorial scheme of medical assistance. Before, however, doing so, it is only right to say that this incompleteness of the Territorial Medical Service was not an oversight, but was intentional, and was created with the object of allowing the Voluntary Aid Societies that exist in our midst—namely, the British Red Cross Society, the St. John's Ambulance Association, and the St. Andrew's Ambulance Association—to step in and supply the deficiency, thus giving the civilian element in the population an opportunity of helping in the defence of the country.

To understand this matter it must be remembered that the territorial field organisation for the removal of the sick and wounded from the whole area of active operations is modelled on that of the Regular Army, which is based on the principle of having three zones—(1) the "collecting," (2) the "evacuating," and (3) the "distributing." The "collecting" zone is situated in the battlefield and its vicinity, and the necessary assistance is rendered by the regimental medical officers, the regimental stretcher-bearers, and the field ambulances. These bodies work in unison and simultaneously they render first-aid treatment and convey the wounded to the rear. It is not necessary to describe here in detail how this is done, but at the end of a battle the result is that the wounded find themselves being cared for and treated by the field ambulances. These latter units are, however mobile bodies, and are organised to move with the troops, so that they must be ready to play the same rôle of assistance should another battle be fought the following day. This they cannot do if their tent divisions and ambulance wagons are filled with wounded. Consequently they must be relieved of their patients without any delay, so as to leave them free to move on with the Army should an advance be made. In the Regular Army this is done by a special unit, the clearing hospital, which takes over the wounded from the field ambulances and makes all necessary arrangements for their further transference, if necessary, to the rear. These clearing hospitals represent the second or "evacuating" zone, and their special function is to receive the wounded and care for them until they can be evacuated by road, rail, or water, and transported to the next or "distributing" zone, with its general hospitals and convalescent homes at the base. The proportion of clearing hospitals allowed in the Regular Army is one for each division, and it is formed whenever the division is mobilised. Each clearing hospital contains 200 beds, and it is staffed

in the same proportion as a stationary hospital, so that its *personnel* will consist of eight medical officers, one quartermaster, and eighty rank and file, but there will be no Army nurses of the Queen Alexandra Imperial Military Nursing Service attached to it. As regards its location, this must vary with circumstances, but as far as possible it will be placed so as to be available for use at the head of the lines of communication, and be within the reach of the field ambulances so as to relieve the latter of their sick and wounded and allow them to follow up the Army.

This maintenance of connection with the field ambulances is the main business of a clearing hospital, and there may be circumstances where it may be necessary not only to keep in touch with them by sending forward a small proportion of the *personnel*, but even, as in the case of a rapid advance of the Army, for the whole clearing hospital to go right up to the field ambulances and take over their sick and wounded on the spot. Having thus relieved the field ambulances of their sick and wounded, the clearing hospital must at once turn its attention to getting rid of its occupants, for it is designed to give only temporary shelter to them, and is merely the channel by which they are passed on to the stationary hospitals erected on the lines of communication or to the general hospitals. In fact, a clearing hospital may serve as a centre for sorting out the patients. In the case of a battle fought in our own country during an attempted invasion, those not seriously hurt, yet not able to rejoin their regiments for some time, might be sent to their own homes, while those severely hurt might receive any further necessary treatment and then be transmitted at once to the rear or detained for a few days. This latter course might also be followed in connection with trivial cases that needed only two or three days' treatment to fit them to return to the ranks. Under no circumstances, however, must the clearing hospital become congested. It belongs to the "evacuating zone," and it should always be able to receive patients from the front. A very important factor in this work of evacuation is suitable transport for conveying the sick and wounded from the field ambulances to the clearing hospitals, and from there to the railway or any stationary hospital in the rear. In the Regular Army the arranging for this transport is one of the duties of the director of transport, and it is met by making use of the empty wagons of supply columns and parks returning to replenish at the advanced base for stores. If required, additional local transport is also provided by hire or requisition.

From what has been said it must be quite apparent that clearing hospitals play a very important part in the organisation for the removal of the casualties in war and their conveyance to a suitable place for their necessary treatment. In fact, they are really "the pivot upon which the whole system of evacuating sick and wounded turns." Representing as they do on a larger scale the tent divisions of the field ambu-

lances, they form the central point upon which the "collecting zone" converges and from which the "evacuating" and "distributing" zones diverge. Closely associated with them are the matter of transport and several other duties that are inseparable from the removal of injured persons for any distance, such as the formation of "rest stations," where they may receive refreshment and be made comfortable while waiting to be loaded on trains or after they are

taken off trains. These clearing hospitals do not as yet exist in the Territorial Medical Service, and as such assistance requires forethought and preparation, the military authorities are very properly turning their attention to supply this want in the scheme of territorial medical assistance. At present the indications are that they propose to include the various Voluntary Aid Organisations in the work of home defence and utilise their services for doing so.

TROPICAL DISEASES.

KANGRI CANCER.

Of all the modes in which epithelioma manifests itself there is probably none more curious nor more interesting than that peculiar form of cancer met with in Northern India, in the province of Kashmir, which is known as Kāngri Cancer. Every native of Kashmir—man, woman, and child—carries under the loose woollen robe which constitutes their only garment a wicker basket, enclosing an earthenware jar, filled with burning charcoal. Such is the primitive fashion in which these quaint people protect themselves against the intense cold which—many will be surprised to learn—is a not uncommon feature of the Kashmiri climate. In course of time the protecting wickerwork which covers the hot pot or Kāngri gets worn or charred away, and the unprotected skin of the abdomen and thighs gets more or less severely burnt, with the result that every adult Kashmiri possesses a mottled, pigmented area of scars in the region of contact with the basket.

In these areas epithelioma so frequently arises that this particular form of cancer constitutes an overwhelming majority of the total number of cases of malignant disease met with. The actual carcinoma may begin as an ulcer or as a warty growth, or may originate in an ulcer or a wart which has been in a quiescent condition for a considerable period. Sometimes one meets with a simple chronic papilloma and an undoubted epithelioma existing side by side. The growths always commence on the scarred and damaged areas which result from the burns; and when they have developed malignant characters behave exactly as do other epitheliomata arising on the skin surface under other conditions. Secondary deposits occur in the axillary or more commonly in the inguinal glands, dependent, of course, upon the site of the primary growth, *i.e.*, whether above or below the umbilicus. As to whether visceral metastases are common it is not possible to form an opinion. There is no clinical evidence pointing in that direction, but as the Kashmiri will not permit post-mortem examinations there is no definite evidence.

A critical survey of a large number of cases reveals several very interesting facts about this curious condition. In the first place, although men and women must be burned and scarred with equal frequency, yet the number of cases of cancer met with in women is very small—only one quarter of the whole. This may in part be accounted for by

the reluctance of the native to allow his women folk to be treated by a European doctor; but this cannot be the whole explanation, and one is forced to the conclusion that some other ætiological force is at work in addition to the presence of the pre-cancerous areas on the skin. There is another clinical fact which points in this direction, for it is of interest to note that hardly any cases of Kāngri cancer occur before the age of forty, yet quite young children show the pigmented scars. These points fit in with the fully recognised fact that women appear to exhibit a much less liability to squamous cancer than men, and that although indubitable cases of epithelioma have been described in young children—for instance, cancer of the lip in a boy of twelve is reported—yet they are very rare before late adult life is reached.

Not the least interesting feature of Kāngri cancer is the occasional occurrence of multiple primary growths, one on each thigh, and perhaps one on the abdomen. This fact is of peculiar importance in connection with the whole question of multiple primary lesions. In the case of such widely different positions as the thigh and abdomen—especially when the peculiar circumstances of the origin of these growths are taken into consideration—there can be no reasonable hesitation in accepting them as examples of separate and distinct lesions of primary origin. And yet, in these rare cases when an epithelioma arises on each lip or two distinct ones on the same lip, the possibility of their separate origin is by many hotly denied, infection from one lip to the other or subcutaneous lymphatic spread being cited as the explanation of the phenomenon. Similarly in the case of the vulva, where multiple growths are by no means rare, the same objections have been advanced. In view of the evidence afforded by Kāngri Cancer, and also by the somewhat allied condition of *x-ray* cancer, in which, indeed, multiple tumours are the rule, it must be accepted as proved that separate and distinct carcinomata can and not infrequently do originate in the same individual.

The very marked pre-cancerous conditions associated with Kāngri cancer, and indeed with so many of the superficial cancers—*x-ray* cancer, lupus cancer, betel-nut cancer, and leukoplakia cancer—lead one to speculate as to the extent to which cancer in less accessible portions of the body, such as the breast, rectum, stomach, etc., may be similarly preceded.

HOSPITAL ADMINISTRATION.

CONSTRUCTION AND EQUIPMENT.

MODERN X-RAY APPARATUS.

VERY great improvements have been made in every portion of the apparatus required for the application of *x*-rays since Professor Röntgen's discovery. A large army of scientific investigators have attacked the problem, and amongst them may be mentioned Messrs. Siemens Brothers, of London and Berlin, the well-known electrical engineers. Messrs. Siemens have been connected with electricity as long as it has been a practical science. The firm have

ness. Another important point that those who have used *x*-rays will be familiar with is the protection of the operator and of the patient from the effects of the rays not actually required in the operation. Messrs. Siemens have given great attention to this matter also, and have devised several appliances of rubber, lead, and lead glass, which completely shield

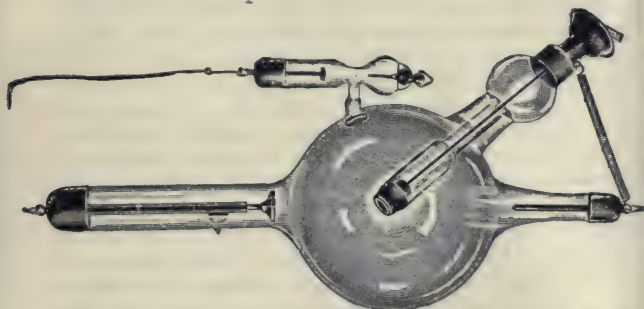


FIG. 1. X-RAY TUBE, WITH REGULATOR, TANTALUM ANTI-CATHODE, AND WATER-COOLING ARRANGEMENT FOR THE LATTER.

very fully equipped laboratories, and maintain a highly trained scientific staff, and amongst other improvements which they have introduced is the substitution of tantalum for the anti-cathode in place of platinum in the *x*-ray tube. As those who have used *x*-ray tubes know, the anti-cathode, the electrode which receives the cathode rays and passes them out through the glass to the object, becomes heated to a very high temperature when the tube is

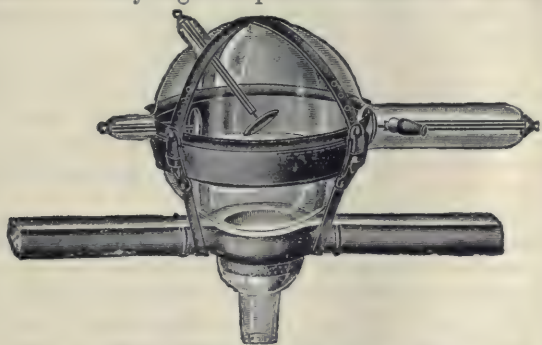


FIG. 2. X-RAY TUBE, WITH LEAD GLASS SHIELD.

used for any time. The substitution of tantalum, which has a melting point 600°C . higher than that of platinum, gives tubes in which this metal is used a great advantage. In fig. 1 is shown an *x*-ray tube, as made by Messrs. Siemens, with tantalum anti-cathode, the anti-cathode having a cooling arrangement attached; the tube is also fitted with the regulating device that will now be familiar to all users of *x*-ray tubes, which enables the operator to maintain the vacuum of the tube fairly constant, or, as it is usually expressed, to keep it of uniform hard-

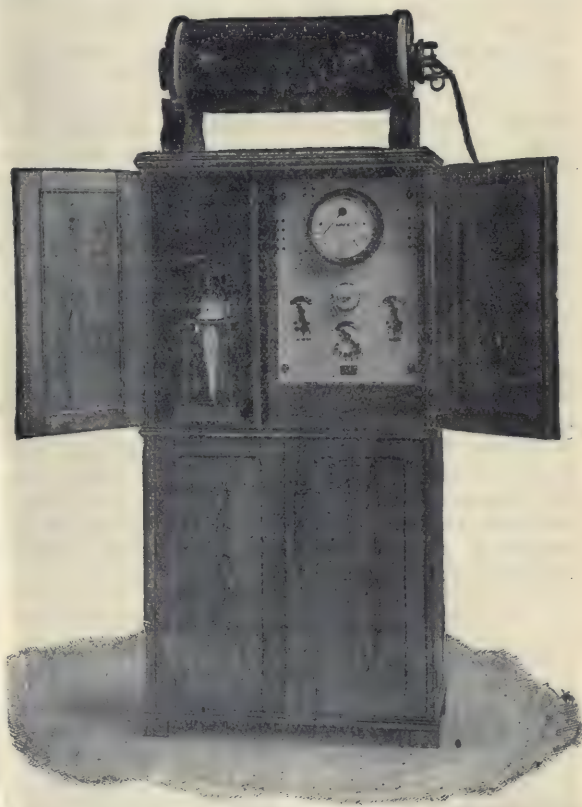


FIG. 3. CABINET, SHOWING COMPLETE X-RAY OUTFIT.

both operator and patient. Fig. 2 shows one of these, in which an *x*-ray tube is shielded by lead glass.

Another important point in connection with the use of *x*-rays, and particularly in the taking of radiographs, is the suppression of the inverse rays. With the induction coil, worked from an accumulator, or from a continuous current supply service, there is a small spark, when the primary current is first made, and this gives rise to what are termed inverse rays; these tend to give imperfect prints, and to render the sharp outlines that are so valuable in radiographs difficult to obtain. The trouble is overcome completely by the adoption of Dr. Albers-Schonberg's compressor, consisting of a lead-lined metal cylinder, or rectangular box, which effectually screens them off. In addition, the cylinder has an ebonite rim, by means of which the part under the rays may be compressed; the compression reduces

the movement due to respiration, and thereby gives greater sharpness to the radiograph. Messrs. Siemens are the sole makers of this apparatus. It is arranged with an examining table, the compressor, with the x-ray tube, being moved to any part of the table, and over any part of the patient that may be required. The radiographs obtained by the aid of Dr. Albers-Schonberg's apparatus, are very clear and sharp.

The inverse rays are suppressed by other means devised by Messrs. Siemens, including an electro-

lytic valve, which only allows currents in one direction to pass, and they have worked out a complete series of apparatus, by means of which current may be used from any available source, and radiographs may be obtained very quickly and of sharp definition. They have also brought out cabinets, of which one is shown in fig. 3, containing a complete x-ray outfit. Other cabinets are arranged on trolleys for use in hospital wards, and others again are made completely portable, so that the surgeon can carry them with him in his carriage.

INSTITUTIONAL NOTES AND NEWS.

A NEW INFIRMARY FOR PERTH.

It has now been decided to erect a new Infirmary for Perth city and county. The sum subscribed at present is only about £6,000 short of the estimated expense of £36,800. The building will be a modern, up-to-date institution, erected at Western Avenue, Glasgow Road. Mr. James Miller, architect, Glasgow, the architect of the Glasgow Royal Infirmary, to whom has been entrusted the planning of the new building, has drawn up specifications for a modern hospital, thoroughly up-to-date, with 104 ward beds, 8 special ward beds, and 8 other beds—in all, 120 beds—with accommodation for 32 nurses, 25 servants, out-patients' department, laundry, etc., at a total cost of £36,800. The amount received for reconstruction of the present buildings is £15,699 18s. 3d., and of this £9,167 13s. 3d. is available for a new infirmary. The special fund for the new infirmary amounts to £4,830 14s. 5d.; the subscription from the Glovers' Incorporation is £200; accumulation of interest, £801 1s. 4d.; legacies earmarked, £7,000; estimated price of old infirmary buildings, £10,000, leaving available for the erection and completion of a new infirmary £32,000. Only £6,000 remains unprovided for.

THE NORWICH HOSPITAL.

HIS MAJESTY THE KING has signified his intention to lay the foundation stone of the first of the series of new buildings of the Norfolk and Norwich Hospital on the occasion of his visit to Norwich on October 25. The ceremony will take place after luncheon. His Majesty will be received at the hospital by the representatives of the institution, and will then be asked to lay the foundation stone of the building which is to form the new isolation block and the new septic block. His Majesty has himself subscribed 250 guineas towards the £50,000 which will be required, and the total subscription list stands to-day at £12,620, so that, in round figures, something like £37,000 is still needed to complete the extension. The need for the new isolation block and the new septic block is great. The only accommodation at the present time for cases of infectious disease consists of two rooms on the ground floor of the old wing of the hospital, at best a makeshift. The irregular wooden floors, with wide intervals between the boards, were laid about a hundred years ago; and the walls are such that it is impossible to wash them down. Cases of an infectious nature, such as scarlet fever, measles, whooping cough, and mumps, are bound to occur from time to time amongst the inmates of the hospital, and have occurred, and more than once in the recent history of the hospital outbreaks have taken place which would have been nipped in the bud had the proper facilities for isolation been possible.

ROYAL VICTORIA INFIRMARY, NEWCASTLE.

At the last quarterly Court of Governors of this Infirmary, under the presidency of Sir George Hare Philipson, Chairman of the House Committee, a presentation was made to Sir Riley Lord in recognition of the valuable services he has rendered to the Infirmary. The gift took the form of an illuminated album containing an address, three water-colour sketches, and the signatures of the governors, enclosed in an oak casket. In making the presentation, the Chairman stated that it was a small acknowledgment of Sir Riley's valuable services as Chairman of the Queen's Commemoration Infirmary Fund, Chairman of the Building Committee of the new Infirmary, Chairman of the Subscriptions Committee, and in various other positions in connection with the committees of that institution; and in admiration of his action during his first mayoralty in commencing and in carrying to a successful issue the scheme for obtaining from the general public £100,000 as a commencement towards the buildings of the Infirmary.

The address was as follows:—

"The Governors of the Royal Victoria Infirmary, Newcastle-upon-Tyne, at their quarterly court held on May 27, 1909, in testimony of their admiration for Alderman Sir Riley Lord, J.P., and in recognition of the eminent services which he has rendered to the institution—and of such may be specially mentioned his inauguration, during his first mayoralty, 1895-1896, of the Queen's Commemoration New Infirmary Fund, whereby over one hundred thousand pounds was subscribed for the building of the new Infirmary—his valuable services as the Chairman of the Building Committee of the new Infirmary, and as the Chairman of the Subscriptions Committee, have pleasure in appointing him a President of the Royal Victoria Infirmary.

"SIR GEORGE HARE PHILIPSON (Chairman).

"W. J. SANDERSON (Vice-President)."

Sir Riley Lord, in returning thanks, remarked that the Infirmary was an institution which appealed to the hearts and consciences of all the people, whether they were rich or poor. He believed that, first of all, their success had been due to the love and affection the people had for Queen Victoria; they wished to do something to manifest their appreciation of her good sixty years' reign. Then, in the next place, everybody seemed to realise the need for a new hospital, the old one being utterly inadequate in every respect, except in regard to its position near the railway station. The new Infirmary cost £325,000, and, comparing the cost with the cost of other infirmaries built subsequently, the cost of the Newcastle Infirmary worked out at a less sum than that of other hospitals. A little over nine-tenths of the money raised for the building of the Infirmary came from persons who were never likely to be patients of the charity, and slightly less than one-tenth was obtained from workmen.

THE CARDIFF INFIRMARY.

At the last ordinary monthly meeting of the board of management of Cardiff Infirmary, Colonel Bruce-Vaughan presiding, the Chairman announced the receipt of a communication from Sir W. T. Lewis to the effect that Mrs. John Nixon would lay the foundation-stone of the new wing on October 21, at three o'clock. The addition, costing £33,000, to which Mrs. Nixon has generously contributed 10,000 guineas, is in memory of her late husband, Mr. J. Nixon (Nixon's Navigation Colliery). The Chairman also announced that a grant of £1,500 had been made by the Treasury for foundation of a Cardiff medical school. The progress of the infirmary in the last few years from a building point of view, and the excellence of its staff, had contributed in no small degree to the allocation of the grant for a medical school. Dr. MacAlister (one of Sir Thomas Raleigh's committee), on his visit to Cardiff Infirmary last year, laid special stress on the provision for clinics in the new out-patient department, and the efficiency of every other department. The doctor's observations on the possibilities of Cardiff as a school of science had undoubtedly led to the recommendation by his committee of this grant. Probably the first step which would be made by the council of the college would be the appointment of a professor of pathology. They had made provision for this appointment by including in the new wing scheme the provision of buildings which would cost, including equipment, £4,600. The equipment in every department would be thoroughly up to date. The financial statement pointed to an overdraft of £21,160 19s. 11d.

CLEVELAND CONVALESCENT HOME.

The Right Hon. Herbert Samuel, M.P. for Cleveland, visited Saltburn on Saturday for the purpose of performing the opening ceremony of the new Workmen's Convalescent Home for the Club and Institute Union. The building, which was formerly a school, originally cost £16,000, but was recently purchased by the union for £6,000, and the alterations cost £4,000. The exterior is of lofty and massive character. The interior, however, did not in its arrangements and fittings meet the growing demand which exists amongst workmen for a higher standard of comfort, and some £2,500 has been expended in removing the "dormitory" and "institution" appearance and in fitting it as a manor house or first-class hotel. A further expenditure of £2,000 has been necessary for furniture. The Home, which will accommodate 54 residents, will be supported entirely by the Union and its clubs, and no appeal is made for any outside help, following in this the practice initiated with the establishment of the Home at Pegwell Bay. The establishment of a third Home on the West Coast is under consideration, and a fourth in the South West also.

NEW HOSPITAL AT KILMARNOCK.

The infectious diseases hospital, which the Corporation of Kilmarnock has erected at Kirklandside, was formally opened last week. The hospital consists of seven different blocks, and provides accommodation for forty-eight beds, a number of which will be available for patients from the neighbouring burghs of Galston, Newmilns, and Darvel. The total cost of buildings, furnishings, site, etc., amounts to about £20,000. The opening ceremony was performed by Mrs. Robertson, wife of Bailie Matthew Robertson, convener of the Public Health Committee, who was presented with a gold key from the architect, Mr. James Hay, and the contractors. A company numbering about three hundred ladies and gentlemen inspected the buildings, and after-

wards were entertained to luncheon in one of the wards, Provost Gemmill presiding and Bailie Robertson officiating as croupier. Councillor W. F. Anderson, Glasgow, proposed "The Kilmarnock Burghs Infectious Diseases Hospital," stating that this was one of the most complete hospitals it had been his lot to see during his experience of eighteen years. Bailie Robertson replied. The architect afterwards presented the Provost and Bailie Robertson with a handsome rose bowl each as a souvenir of the occasion.

HOSPITALS AND THE BUDGET.

An interesting discussion took place at a recent meeting of Arbroath Infirmary directors with regard to certain proposals contained in the Budget referring to death duties. The question was raised by Mr. W. K. Macdonald, the clerk, who said it appeared to him that the provision in the Budget making any gifts or charitable subscriptions made five years before a man's death liable to death duties might seriously affect the Infirmary, because while a man might be quite willing to give out of his income a charitable subscription he might not like that his heirs at his death should be called upon to pay duty on all of these sums. It was both a wrong and an unwise thing to penalise charitable subscriptions and make them liable to these death duties. These subscriptions were naturally paid out of a man's income, and if he paid income-tax on that it seemed a sort of double tax. One could quite understand death duties being charged if a man gave away part of his capital. It might be right enough to endeavour to frustrate any attempt to evade the death duties in that way, but the case was different as regards a subscription. If they put a shilling into the church plate that apparently would be liable to duty if the Government found out that they had given it. That seemed to be rather absurd.

In the discussion that followed the clerk said that in regard to the Infirmary the authorities could call for the production of the Infirmary accounts, and they would see everything that was given.

Mr. Alexander Balfour of Inchock thought it was an extraordinary thing in these days of freedom and liberty that a man who had been careful of his means and was trying to benefit others for the good of the community should have his money laid hold of—that if he chose in his lifetime to give away money to the Infirmary or to any friend or any person, that it should be taxed. Whatever their private opinions might be, he did not think they, as Infirmary directors, were at liberty to allow this to pass without protecting that valuable institution of theirs, which had done noble service for the town and district in bygone days. Mr. A. R. Duncan of Parkhill suggested that instead of making a regular petition they should point out that surely a mistake had been made in the Budget. The old clause was that if a man gave anything away in his lifetime to anyone else that the duty had to be paid if the transaction occurred within one year of his death. At that time there was no question of collecting death duties upon subscriptions, even although they were paid within one year before death, and he thought the new Act was simply meant to say that this one year shall be lengthened to five years, and that there could be no intention of taxing subscriptions in the way that had been stated. He thought the course to adopt was to draw up a sort of memorandum, to be sent to the Chancellor of the Exchequer, pointing out that if his Act were carried out in its entirety it would involve a payment of duty upon subscriptions.

It was finally agreed to remit the matter to the Finance Committee.

NEWS AND COMING EVENTS.

DR. A. T. THEOBALDS has resigned her post of lady resident medical officer at the Halifax Poor Law Infirmary.

DR. F. E. WYNNE has been appointed medical officer of health to the Leigh Town Council at a salary of £400 per annum.

MR. F. M. MILNE, B.Sc., M.B., has been appointed Lecturer in Clinical Pathology, and Mr. Charles Kerr, M.B., C.M., Clinical Medical Tutor in the University of St. Andrews.

DR. QUARRY, medical superintendent, Lambeth Poor Law Infirmary, and medical officer of the workhouse, has been granted leave of absence for six weeks to enable him to take a sea voyage, which it is hoped will have the effect of fully restoring him to health.

MR. F. BOWREMAN JESSETT, F.R.C.S., has resigned the post of surgeon to the Royal General Dispensary, Bartholomew Close, E.C. Mr. Jessett succeeded the late Mr. Morrant Baker as surgeon to the Dispensary, and has held the post for 27 years.

THE inaugural address of the session 1909-10 of the University of Bristol will be delivered in the large hall on Thursday evening, September 30, at 8 o'clock, by the Vice-Chancellor of the University (Sir Isambard Owen, M.D.), who will take as his subject "The Significance of a University."

THE opening address of the winter session at the Post-graduate College, West London Hospital, Hammersmith Road, W., will be delivered in the College on Monday, October 11, at 5 o'clock P.M., by Professor Theodor Schott, M.D., of Nauheim. Previous to the address tea and coffee will be served at 4.15 P.M.

WE have received from the National Food Reform Association, 178 St. Stephen's House, Westminster, a new and revised edition of "Hints Towards Diet Reform, with 24 Simple Recipes," which contains an artistic frontispiece representing the Houses of Parliament as seen from the new offices of the Association. A specimen copy, price 3d. post free, may be obtained on application to the Secretary.

AT an inquest at Bristol last week on a man who had died of pneumonia it was stated that while the nurse was leaning over his bed he snatched a hatpin from her cap and stabbed himself with it. The pin penetrated the body to a depth of about three inches and punctured the heart. The nurse pulled out the pin immediately and sent for a doctor, who found the man in a dying condition. The doctor attributed death to pneumonia and the wound in the heart.

IT is proposed to add a clause to the Anæsthetics Bill, which is to be reintroduced next sessions, placing restrictions on the administration of cocaine. The Bill proposes to prohibit all but registered medical practitioners and dentists from administering anæsthetics for operations except under certain conditions, and it also seeks to prohibit the giving of a death certificate in the case of anyone dying while under the influence of an anæsthetic.

RETIREMENT OF PROFESSOR CLELAND.

IN view of the retirement of Professor John Cleland, M.D., F.R.S., from the Chair of Anatomy, at the end of the present month, there has been set on foot, on the initiative of the Business Committee of the General Council of the University of Glasgow, a movement for making appropriate recognition of his long and distinguished

services. A circular has been issued to the whole body of University graduates and to members of other learned bodies with which Professor Cleland is or has been connected, bearing the signatures of the Earl of Glasgow, the Lord Provost of Glasgow, Sir John Stirling Maxwell, Bart., Sir James Fleming, Professor John Glaister, M.D., Sir Hector C. Cameron, M.D., the Rev. Dr. John Smith, and Principal J. Yule Mackay. In the circular it is stated that the form of recognition will, to a large extent, depend on the amount subscribed, but it is thought that it might fitly include the provision of some fund for the advancement of anatomical and anthropological science, and the presentation to the University of his portrait or bust by an eminent artist. A very representative committee has been formed, and the preliminary list of subscriptions, annexed to the circular, shows that the movement has already met with a very appreciative response.

A Scottish medical correspondent has sent us particulars of the career of this distinguished scientist and teacher. Dr. Cleland is in his seventy-fourth year, and is a native of Perth, where his father practised medicine. His professional education was obtained chiefly in Edinburgh, where he was a pupil of the celebrated John Goodsir. He also obtained part of his training in Paris and in Germany. At an early period of his career he acted as demonstrator to Professor Allen Thomson in the University of Glasgow, and afterwards he became Professor of Anatomy and Physiology in Queen's College, Galway, from which, after an occupancy of fourteen years, he returned to succeed Professor Allen Thomson in Glasgow. Professor Cleland has during his thirty-two years' incumbency of the Chair passed many thousands of students through his hands, and has enjoyed a great reputation as a teacher and as one of the most outstanding figures in scientific circles.

Among the most important of Professor Cleland's writings are his thesis on the structure and mechanism of the gubernaculum, published in 1856, and his papers upon the development of the skull and cranial variations, which appeared in the Philosophical Transactions of the Royal Society of London in 1862 and 1870. He collected in a volume entitled "Memoirs and Memoranda in Anatomy" many of his contributions to the scientific press of the last forty years. In his text-book, published in association with Dr. Mackay in 1896, he included much of his original observations made in the course of his life's work. Some of Dr. Cleland's most interesting and important papers are those containing his speculations on the great problems of thought as they present themselves to the naturalist. These were also collected and published under the title of "Evolution, Expression, and Sensation." In the Darwinian controversy, when it was at its height, Professor Cleland took an active part. Of his other works, "The Physical Relations of Consciousness and the Seat of Sensation," originally published in 1870, is also of note. The building up of the splendid museum with which the University of Glasgow is now enriched was to Dr. Cleland a labour of love in which he never wearied. Professor Cleland has had many honours conferred on him. Possessed of the artistic gift, his lectures on the relationship of sculpture and painting have always been received with the utmost appreciation. He is also the author of a work in verse.

Those desiring to take part in the recognition are invited to communicate with Mr. Archibald Craig, LL.B., 149 West George Street, Glasgow, the Clerk of the University General Council, who is acting as Secretary and Treasurer.

THE medical staff and lecturers of the Royal Dental Hospital of London, 32 Leicester Square, W.C., will hold a conversazione and distribution of prizes on Wednesday, October 20, at 8 o'clock P.M., at the Royal Institute Galleries, Princes Hall, Picadilly. The distribution of prizes will be made at 8.30 P.M. punctually by Sir Victor Horsley, F.R.C.S., F.R.S., and this will be followed by music, etc.

A RECEPTION of the members of the Child Study Society, London, will be held by the President, the Right Hon. the Earl of Stamford, on Thursday, October 7, at 8 P.M., at 90 Buckingham Palace Road, S.W. Short addresses on 'Child Study' will be given by Miss Alice Ravenhill, C. W. Kimmins, D.Sc., M.A., and G. E. Shuttleworth, B.A., M.D. Morning dress will be worn. Tea, coffee and light refreshments will be served during the evening.

THE winter session at Guy's Hospital Medical School will commence on October 1. The first meeting of the Pupils' Physical Society will be held on October 7, when Sir Hector Cameron will read a paper entitled "A Plea for the Treatment of Abscess by Lister's Antiseptic Method." Previous to the meeting a dinner of old students will be held in the Students' Club, when the chair will be taken by Mr. H. Cosmo Bonsor, the treasurer of the hospital.

At a special meeting of the governors and subscribers of the Birmingham and Midland Eye Hospital, held on September 16, Mr. Walter Wilkinson presiding, it was proposed and seconded that Law 7 should be altered to read as follows: "That donors and subscribers shall have the privilege of exchanging an in-patient ticket for six out-patient tickets; subscribers of two guineas and a donor of twenty guineas shall have the privilege of exchanging six of his or her own out-patient tickets for one in-patient ticket, on application to the secretary. In-patient tickets to continue in force fourteen days; out-patient tickets to continue in force six weeks. That no persons shall be admitted as a patient to the institution without a ticket except in cases of accident or sudden emergency." After a short discussion, Mr. Conway Lowe put forward an amendment, but, as this could not be discussed without a month's notice having been given, it was decided to put the original motion to the meeting. This was done, and the proposal was defeated by four votes to three.

In the House of Commons on September 16, Capt. Craig asked the Home Secretary whether he would consider the advisability of issuing regulations compelling manufacturers of medicines liable to patent-medicine duty to print on the label the full ingredients, as well as the diseases they purported to cure; and whether he would consider the advisability of increasing the size of the lettering of the Government stamp as a further precaution against ignorant people believing that the contents were guaranteed by the Government. Mr. Gladstone replied: "I am in communication with the Privy Council Office about the point raised in the first part of the question, but I am disposed to think that the matter may be one of sufficient importance for an inquiry by a Select Commission next session. As regards the second part of the question, I am informed that new designs for medicine stamps have recently been adopted, and the printing plates are being prepared by the engravers. In the new designs it will be more clearly indicated that the stamp does not imply any Government guarantee." Captain Craig: "Will the committee be appointed next session?" Mr. Gladstone said he thought it would be desirable. Mr. A. Lynch asked "whether in certain foreign countries it is not a matter of obligation to print the full description," to which Mr. Gladstone replied that this might be so.

DR. J. R. STEINHAUSER has been reappointed medical officer of health for Lewis.

THE jubilee of the National Hospital for the Paralyzed and Epileptic (Albany Memorial) will be celebrated at the hospital on Saturday afternoon, October 9. H.R.H. the Princess of Wales will receive the Jubilee Purses at 3.15 o'clock. Cards of admission will be issued by the Secretary at the Hospital.

THE Home Secretary has signified to the Council of the Royal College of Surgeons of England his decision to approve the by-laws regarding the admission of women to the examinations for the diplomas of the College. He has further expressed his willingness to sign the formal document which is to be submitted after the next meeting of the Council of the College on October 14. It is understood, however, that meanwhile it will be possible to complete the necessary formalities in time for women to enter for the examinations of the Royal College to be held in January next.

EDITOR'S LETTER-BOX.

BUDAPEST AND BUDA-PEST.

DEAR SIR,—As a friend of the Hungarian people, I am much gratified by your sympathetic article on the Medical Congress at Budapest. In reading it over I notice that you have used the obsolete form of the name of the capital city. Bud-Pest implies two cities, whereas there is now but one city, under the control of one authority. For more than thirty years Budapest has been the name of the whole of the capital, and it applies to every part of it on both banks. As the name was given and is used by Hungarians, I submit that it should be adopted and used by other nations.—Yours very truly,

W. H. SHRUBSOLE.

22 Halons Road, Eltham, September 13, 1909.

HOPE HOSPITAL.

SIR,—I have to thank you for copy of your issue of THE HOSPITAL for September 11, in which on page 625 you refer to me in connection with Hope Hospital. Towards the end of your article you quote Mr. Bretherton as saying, "When a shortage of staff was pointed out to us by the Local Government Board the Guardians remedied it immediately." This must refer to some ancient history, for there has not been any addition to the medical staff for a long time. Further, Dr. McVail in his report to the Royal Commission on the Poor Laws said the place was so understaffed that the "work was bound to be rushed." A few weeks ago Mr. Lowry (the Local Government Board inspector) drew the Guardians' attention to this, and urged them to attend to it as soon as possible. So far from doing so are they that Mr. Bretherton now actually denies that there is any understaffing (see your own article). In other words, he denies the correctness of Dr. McVail's report and the Local Government Board inspector's opinion. You may judge for yourself when I say that there are only two resident medical officers, who are responsible for attending to between 800 and 900 patients.

I will only add that the *Lancet* and the *British Medical Journal* have both refused to insert the Guardians' latest advertisement and have put the post on the "Warning Notice" pages.

Yours faithfully,

J. H. TAYLOR, M.A., M.B.,

Hon. Sec. Salford Div. B.M.A.

Holly House, 299 Eccles New Road, Salford,

September 21, 1909.

THE ANTI-VIVISECTION HOSPITAL.

The following Correspondence between the Secretary of the above Institution (Mr. George W. F. Robbins) and Sir Henry Burdett, K.C.B., K.C.V.O., is reprinted from "The Times." The profession and the public by reading it will be able to understand why it is that none of the great Funds can in justice to the public accept this Institution as an ordinary hospital in present circumstances.

I.—FROM MR. ROBBINS.

Times, August 28, 1909.

SIR,—The rejection of a grant of £97 10s., which was made to this hospital by the Council of the Metropolitan Hospital Sunday Fund, may seem unjustifiable to the general public. Almost universal approval has been expressed to this office by those who know all the circumstances. In particular, Battersea, the district most concerned, heartily supports the board's action. Last year (also in June this year—a fact not generally known) the distribution committee of the M.H.S.F. peremptorily informed this hospital that, unless it altered its constitution in the matter of its anti-vivisection methods, etc., it would not recommend it for a grant. To this the chairman replied that "the board of management had no intention of recommending any alteration in our constitution in the essential and particular design of the institution as a general hospital for medical and surgical treatment from which 'vivisection' (as defined by the Royal Commission of 1876) is utterly banished." A reply was received as follows: "The terms of your letter make it impossible for the committee to recommend an award being made to your hospital."

At the recent Mansion House meeting, Sir Henry Burdett, K.C.B. (after accusing this hospital of "pretentious humbug," and making a damaging assertion, for the proof of which I am still awaiting his convenience), supported the vote with these significant words, "In giving the grant it should go forth that . . . it was given in the hope that the authorities would mend their ways, purge their methods, and, in fact, fall into line with all the best administered hospitals in the country."

The hospital board, therefore, would, I submit, by any acceptance of a grant so awarded, have not easily escaped from a serious charge of entertaining, *ipso facto*, a possibility of such a "falling into line" (undoubtedly "Burdettese" for tearing up its anti-vivisection constitution), or of accepting the grant under false pretences.

To the Court of Governors of the hospital—which is, in fact, as a body, totally opposed to vivisection in every form—it has to account for its action and for any suspicion of faltering in its principles.

Add to this the other damaging and undoubtedly insulting remarks of Sir William Church, Mr. Thomas Bryant, F.R.C.S., Sir Henry Burdett, and the Rev. J. Grundy, and the reply to the M.H.S.F. assumes another and an intelligible aspect. It becomes, not merely justifiable, but necessarily straightforward and dignified. The board fully realised the responsibility of refusing any money given for relief of suffering. It did not believe that the poor of Battersea would eventually suffer. In this view the moral and financial support which has already come to hand has fully confirmed it.

Yours,

GEORGE W. F. ROBBINS, Secretary.
National Anti-Vivisection Hospital and Battersea
General Hospital, Battersea Park, S.W.

II.—FROM SIR H. BURDETT.

Times, September 10, 1909.

SIR,—Being engaged at the moment on a tour of inspection of the principal hospitals throughout the country, I have only to-day had an opportunity to consider the letter from Mr. Robbins which you published on the 28th ult. My statement at the Mansion House was a matter of fact, not opinion. It was that the medical profession knew perfectly well that in the treatment of disease the Anti-Vivisection Hospital must employ remedies which would not have been available had it not been for the discoveries resulting from vivisection. It is pretentious humbug for any institution to claim to be an up-to-date modern hospital, worthy of public confidence, if the management exclude the application of all such remedies in the treatment of disease. What those remedies are the evidence given before the Commission now sitting, which has been published, clearly demonstrates.

Mr. Robbins invited me to name these remedies, it is true; but that I am not called upon to do, for the evidence referred to is authoritative and convincing. Anyway, the fact of the knowledge possessed by the medical profession, to which I referred in my speech, places no obligation on myself to name remedies and so enable Mr. Robbins to attempt to draw a herring across the scent. Either the Anti-Vivisection Hospital does employ every remedy in the treatment of disease prescribed in a modern up-to-date hospital, or it does not. If it does, then it is pretentious humbug for its managers to call it an anti-vivisection hospital conducted on purely anti-vivisectionist principles. If it does not, and the aseptic system is not strictly carried out in its surgical wards, it is pretentious humbug for the authorities to call it a hospital at all.

Further, as I have stated in my correspondence with Mr. Robbins, published in *The Hospital* of the 28th ult., until an authoritative statement is forthcoming as to the adoption or non-adoption of the aseptic treatment at this hospital, no prudent person of either sex can surely attend at the Anti-Vivisection Hospital as a patient, or permit any member of their family to do so. *The Hospital* points out: "That this institution does not admit diphtheria cases, and would not give them antitoxin, may be gathered by the evidence given by one of the staff before the Royal Commission." Indeed, the senior physician of this institution about a year and a half ago called diphtheria antitoxin "animal filth" at a large public meeting in the Battersea Town Hall, as reported in *The Times*.

Any who may wish for some examples of pretentious humbug should obtain a copy of the report of the Anti-Vivisection Hospital for 1909 and study it carefully.

I am, Sir, yours faithfully,

Cardiff, September 5. HENRY C. BURDETT.

III.—FROM MR. ROBBINS.

Times, September 16, 1909.

SIR,—Sir Henry Burdett's letter in your issue of September 10 is not to the point at issue between us. He has simply to answer my challenge. Until he does so he must not be surprised if we consider him a negligible quantity in matters referring to this hospital. It is Sir Henry, not I, who is drawing the red herring across the scent.

Here is the clear issue: Sir Henry stated that this "hospital must employ remedies which would not have been available had it not been for the discoveries resulting from vivisection."

He has declared on paper that this is "demonstrably true" and that he "can prove it without my help." Mere assertion will not help him with me. Moreover, he cannot remove his personal responsibility to the Royal Commission, the report of which is not yet to hand, and which does not contain one single piece of published evidence which can help Sir Henry in his dilemma. If Sir Henry replied at all to my challenge, he was bound to name a remedy "which, etc., etc." for that is my challenge.

My last letter was solely to explain to your readers why the Metropolitan Hospital Sunday Fund award was rejected, and I do not propose to trespass further on your courtesy.

Yours faithfully,

GEORGE W. F. ROBBINS, Secretary.
National Anti-Vivisection Hospital and Battersea General
Hospital, Battersea Park, S.W., September 13.

IV.—FROM SIR H. BURDETT.

Times, September 17, 1909.

SIR,—Mr. Robbins's letter in the *Times* of to-day demonstrates the difference between the policy of the Anti-Vivisection Hospital and all other hospitals. Every other hospital makes the claims of the patients the first consideration in everything. Mr. Robbins ignores the whole of the issues raised in my letter of the 5th inst., which vitally affect every patient attending this hospital. Mr. Robbins misquotes my speech directly and my letter indirectly. Using this direct misquotation which converts a fact into an expression of opinion, he waves the word "challenge" above his head and runs away.

This will not do at all. The evidence before the Royal Commission has been published, and proves my statement to the hilt. That statement was that the medical profession knew perfectly well that in the treatment of disease the Anti-Vivisection Hospital must employ remedies which would not have been available had it not been for the discoveries resulting from vivisection.

Every other hospital in the country employs these remedies. If the above hospital employs them, it is pretentious humbug to call it "The Anti-Vivisection Hospital." If it does not, it is not a hospital and ought not to be regarded as a hospital by the great funds. Indeed, if the staff of the Anti-Vivisection Hospital avoid the use of all methods of treatment which are employed as the result of experiments, they are guilty of infinitely more cruelty to their patients than any vivisectionist would dare to inflict upon an animal.

I am, Sir, your obedient servant,

HENRY C. BURDETT.

Wolverhampton, September 16.

CHARITABLE BEQUEST.

THE Rev. Edward Llewellyn Adams, of Scarborough, Congregational minister, for many years pastor of the East-borough Congregational Church, who died in June, aged 80, and left estate of upwards of £34,400, bequeathed £500 to the Smedley Memorial Hydropathic Hospital for the endowment of a ward. Various other charitable legacies under the will were all reduced by a codicil in consequence of the added charges proposed in the present Budget. The testator stated: "It is with great sorrow that I make them [the reductions], but I am compelled to do so on account of the proposals in regard to the estate and legacy duties made in the Budget of April 29, 1909. I consider them to be most unwise and unjust. Unless I do so I find I shall not leave sufficient money to pay the various legacies left under my will." The revised bequests include the following:—£4,000 (reduced from £4,500) to the New Manchester Royal Infirmary for an "Elizabeth Adams" Ward; £4,000 (reduced from £4,500) to the chancellor and treasurer of the Victoria University of Manchester for founding and endowing a commercial scholarship or scholarships to be called the "Charles John Adams" Scholarship or scholarships; £4,000 (reduced from £4,500) to the Scarborough Hospital for the permanent endowment of a children's ward, but charged with a life annuity of £10 to be paid to Frances Ward.

NURSING ADMINISTRATION.

THE LAUNDRY AS PART OF THE MATRON'S DEPARTMENT.

HOSPITAL authorities have perhaps hardly yet realised the extent to which modern surgical developments have magnified the rôle of clean linen in hospital treatment. Amidst all the elaborate precautions against dirt which have grown up round the patient's bed, it has been too often overlooked that some of the most important are those relating to the bed itself; that it matters intensely through what cleansing process the sheets have lately passed; that "washing" may be only another name for infecting, and that the purifying of linen for the patient's use is far too serious a detail in his cure to be entrusted to ignorant people under no inspection, acting on purely commercial lines. Since the issue of separate washing returns at the instance of the King's Fund last year, it has been possible to compare the cost of washing done in outside establishments and the cost of the hospital private laundry. From the tables of comparison thus afforded, it has become evident that there is very little to choose in the matter of expense between the two methods of administration. The cost of the outside laundry varies between £10 10s. per bed at the Miller Hospital and £6 10s. per bed at St. Thomas's and at the Homœopathic Hospital. The cost of the hospital laundry varies between £10 per bed at the Poplar Hospital and £7 per bed at the Royal Free. The larger the hospital, the smaller in proportion the laundry expenses should be, since there are many administrative expenses which, spread over a large amount of work, tend to diminish the averages. It having, then, been ascertained that a private laundry is not a costly luxury, even when built and managed on thoroughly modern lines, it remains to consider what advantages it can claim over the purely commercial undertaking, which relieves the hospital of any responsibility with regard to the soiled linen from the moment when it leaves the doors till it is returned presumably clean. The chief flaw in the commercial treatment of dirty linen is that it can give no security for the linen being efficiently cleansed. The linen technically known as "foul" ought to be subjected to a double process of purification. The first is submersion for an hour in some form of disinfectant, and this process is generally carried out on the hospital premises in establishments where there is no private laundry. But even when it has been treated thus there remains a doubt whether all germs have been destroyed. Nothing can render the foul linen perfectly safe for ordinary use but exposure to a high degree of heat. This can only be ensured in a laundry managed in the interests of the hospital, fitted with washers in which the amount of steam can be controlled so that absolute disinfection is carried out. Where there are midwifery wards, it becomes a matter of urgent importance that articles intended for use in this department should not be mixed with miscellaneous washing. Who can ensure in an ordinary laundry that these precautions

will be observed? A general order may, it is true, be given to this effect, but unless there is a manageress acting in the interests solely of the hospital, and properly instructed in her duties, it will be only too probable that precautions will be regarded as fads, to be evaded whenever possible. Again, the standard of washing ought undoubtedly to be higher in a private than in a public laundry. The conditions of labour will, or should, be far higher; the service should therefore attract a higher class of workwomen, and there should be an element of permanence and of continued training, such as is altogether absent, as a rule, in the commercial undertaking. A good manageress takes a pride in working up the quality of the work, and, being in immediate touch with the matron and other authorities, the success of her work is reflected upon her. It raises the whole affair into a special department in a different category altogether to that of a business wherein some unknown proprietor is endeavouring to squeeze as much profit as possible from the labours of certain employés. The gain to the hospital of a perfected organisation in respect to the removal and return of soiled linen must not be overlooked. If the laundry is well managed, the linen can be dealt with every day, and the staff and plant can be brought down to the lowest possible dimensions. Whatever is part of the daily routine in hospital work is done in an orderly manner. The use of a private laundry (under good management) removes all flurry and disorder from the perpetual collecting and distributing of the ward supplies. They come and go at given hours, and the whole machinery is under the matron's control. By this method also the wear and tear of the ordinary laundry is largely diminished. True, washing subjects every kind of article to a great strain. But the home laundry is free from many of the abuses which creep into enterprises undertaking enormous masses of work at very low contract prices. It is free, too, from the thefts which haunt the commercial laundry, where often a very low class of woman is employed at the lowest grade of wages. In hospitals despatching relays three or four times a week to outside laundries, the "lost" articles mount up to a figure which counts for a good deal in the course of a year, and experience shows that it is seldom much good making frantic efforts to recover them. The price may be made up on demand, but in some cases where the contract price is low "losses" are not made good, there being always the saving assumption that where lists do not tally, it is the sister who is at fault.

For these and many other reasons the hospital laundry ought to be under the control of the matron, with a manageress directly accountable to her for the quality of the work performed in it. Under such conditions alone can complete efficiency be maintained in this department at the lowest possible cost.

THE GRADUATES' MEDICAL SCHOOLS.

DIARY FOR SEPTEMBER 27 to OCTOBER 2.

THE WEST-END HOSPITAL FOR NERVOUS DISEASES, Welbeck Street, W.

Clinical Demonstrations.

At 1.30 p.m.

September 27, Dr. Harry Campbell.

At 5.30 p.m.

September 28, Dr. James Mackenzie.

At 1.30 p.m.

September 29, Dr. Frederick S. Palmer.

September 30, Dr. T. D. Savill.

October 1, Dr. Purves Stewart.

At 5.30 p.m.

October 1, Dr. Eric D. Macnamara.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22 Chenies Street, W.C.

Clinique.

At 4 p.m.

September 27, Dr. J. L. Bunch, *Skin*.

September 28, Dr. Leonard Guthrie, *Medicine*.

September 29, Mr. Cecil Leaf, *Surgery*.

September 30, Sir Jonathan Hutchinson, *Surgery*.

October 1, Mr. J. Gay French, *Ear, Nose, and Throat*.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, HAMMERSMITH, W.

THE special arrangements for the ensuing winter session are as follows :—There will be a lecture or demonstration every day (Saturdays excepted) at 5 p.m. Amongst these will be : (1) Six lectures on Medicine, by Dr. A. P. Beddard, on Wednesdays, Oct. 6, 20, 27, Nov. 10, 17, and Dec. 1. (2) Six lectures on Practical Surgery, by Mr. Aslett Baldwin, on Mondays Oct. 25, Nov. 15, 22, 29, Dec. 6 and 13. (3) Three lectures on *x*-Rays, illustrated by lantern slides, by Dr. Reginald Morton, on Wednesdays, Oct. 13, Nov. 16, and Tuesday, Dec. 14. (4) Three lectures on Mental Diseases, by Dr. Robert Jones, on Tuesdays, Oct. 12 and Dec. 7, at 5 p.m. in the Lecture Room; and Tuesday, Nov. 23 (at the London County Asylum, Claybury, Woodford Bridge, Essex, at 3 p.m.). (5) Three lectures on Tropical Medicine, by Dr. G. C. Low, on Wednesdays, Nov. 3, 24, and Dec. 8.

Lectures on Practical Medicine will be held in the Lecture Room at 12.15 p.m. on Tuesdays by Dr. Harold Pritchard, and on Wednesdays and Saturdays at 12.15 p.m. by Dr. Grainger Stewart. Demonstrations on Cases in the Medical Wards will be held on Fridays at 10 a.m. by the Medical Registrar (except Oct. 8 and 15). Demonstrations on Cases

in the Surgical Wards will be held on Mondays and Thursdays at 10 a.m. by the Surgical Registrar. Pathological demonstrations will be held in the laboratory on Thursdays at 12 noon by Dr. Bernstein, the pathologist.

In addition to the above, demonstrations on Cases in the Wards will be given as follows by the physicians and surgeons :—Dr. Seymour Taylor—Fridays : Nov. 12 and Dec. 3; and Tuesdays : Nov. 16 and Dec. 7, at 3 p.m. Dr. Beddard—Saturdays : Oct. 9, 30, Nov. 20, and Dec. 11, at 2 p.m.; and Wednesdays : Oct. 13, Nov. 3, 24, and Dec. 15, at 4.15 p.m. Dr. Saunders—Thursdays : Oct. 14, Nov. 4, 25, and Dec. 16; and Mondays : Oct. 18, Nov. 8, and 29, at 3 p.m. Mr. Keetley—Thursdays : Oct. 21, Nov. 11, and Dec. 2, at 1.45 p.m. Mr. Edwards—Thursdays : Oct. 7, 28, Nov. 18, and Dec. 9, at 4 p.m. Mr. Bidwell—Mondays : Oct. 11, Nov. 1, 22, and Dec. 13, at 3 p.m.

Demonstrations are given daily in the medical and surgical out-patient rooms and in the special departments at 2 p.m. The physicians and surgeons attend daily at 2.30 p.m. Special classes will be formed for instruction in Diseases of the Throat, Nose and Ear, the Skin, and the Eye; *x*-Rays; Gynecology; the Administration of Anæsthetics; the Clinical Examination of Blood and Urine; Bacteriology; Medical Electricity; Microscopy; Pathology; Surface Anatomy; Intestinal Surgery; Operative Surgery on the Cadaver; Operative Ophthalmic Surgery; Tropical Medicine; Cystoscopy; Venereal Diseases; and Children's Diseases. A special class in Bacteriology (consisting of twelve demonstrations) is held every month by Dr. Bernstein, and meets on Tuesdays and Fridays at 11.30 a.m. and on Thursdays at 10.30 a.m. The fee for the attendance on the hospital practice for three months (including all ordinary lectures and demonstrations) is £6 6s.

LITERARY NOTES.

MESSRS. A. AND C. BLACK are reissuing a cheaper edition of "The Letters of Dr. John Brown, with Letters from Ruskin, Thackeray, and Others," edited by his son and D. W. Forrest, D.D., and containing a biographical introduction by Elizabeth T. McLaren.

THE new subject index of the London Library will prove worth the attention of some medical men. Compiled by Dr. Hagberg Wright (brother of Sir Almroth Wright), and secretary to this institution, it is a valuable piece of work quite worthy the premier British library of general reference. To those who subscribe before October 1 the price is 25s.

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MEDICAL AND ADMINISTRATIVE APPOINTMENTS.

Official Announcement.

ROYAL NAVAL MEDICAL SERVICE.

The next Examination of Candidates for Commissions in the Royal Naval Medical Service will be held at Examination Hall, Thames Embankment, on the 1st and following days of NOVEMBER, 1909. The number of Commissions to be granted will be 15.

The forms to be filled up by candidates will be supplied on application to the MEDICAL DIRECTOR-GENERAL, Admiralty, 18 Victoria Street, S.W.

Candidates must not be under 21 nor over 28 years of age on the day of the commencement of the Competitive Examination, and must be registered under the Medical Act in force as qualified to practise Medicine and Surgery in Great Britain and Ireland.

Successful candidates, immediately after passing the Examination in London, will receive Commissions as Surgeons in the Royal Navy.

J. PORTER.

Director-General.
(5101)

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For further information apply to the Acting Secretary.

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By order,

P. MICHELLI, Secretary.

Greenwich.
September 14th, 1909.

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